## COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

This volume implements AFPD 11-2, *Aircrew Operations*; AFPD 11-4, *Aviation Service*; and AFI 11-202V1, *Aircrew Training*. It establishes the minimum Air Force standards for training and qualifying personnel performing duties in the F-16C/D.  This publication applies to the US Air Force Reserve Command (AFRC) and the Air National Guard (ANG).  MAJCOMs, Direct Reporting Units (DRU) and Field Operating Agencies (FOA) will forward proposed MAJCOM/DRU/FOA-level supplements to this volume to HQ USAF/A3OI, through HQ ACC/A3TO, for approval prior to publication IAW AFPD 11-2, paragraph **4.2**  Copies of approved and published supplements will be provided by the issuing office to HQ USAF/A3OI, HQ ACC/A3TO, and the user MAJCOM/ DRU/FOA offices of primary responsibility (OPR). Field units below MAJCOM/DRU/FOA level will forward copies of their supplements of this publication to their parent MAJCOM/DRU/FOA OPR for post-publication review.  **Note:** The above applies only to those DRUs/FOAs that report directly to HQ USAF.  Keep supplements current by complying with AFI 33-360, *Publications and Forms Management*.  Unless another approval authority is cited, waiver authority for this volume is the MAJCOM/A3, or COMAFFOR for those aircrew and assets under the COMAFFOR's oversight. Waivers to this instruction will be valid until end of the training cycle. Requests for waivers must be submitted through the chain of command to the appropriate Tier waiver approval authority or if a non-tier requirement, to the publication OPR for consideration. COMAFFOR will notify HQ ACC/A3 and home station MAJCOM/A3 of waivers within 72 hours of approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication;* route AF Forms 847 from the field through the appropriate functional chain of command. HQ ACC/A3 will coordinate all changes to the basic volume with all MAJCOM/A3s.  With MAJCOM/A3 approval, waiver

authority for all requirements of the Ready Aircrew Program (RAP) Tasking Memo (RTM) is the OG/CC.  Additional guidance may be provided in the memo.  See paragraph **1.3** for guidance on submitting comments and suggesting improvements.  The subject publication has been reviewed for Information Collection and OMB Reporting requirements.  If data collection or reporting is required from other DoD components or Federal agencies, the information must be approved and licensed prior to collecting.  The authority to collect and maintain the records prescribed in this instruction are 37 USC 301a, *Incentive Pay*; Public Law 92-204 (Department of Defense Appropriations Act for 1972), Section 715; Public Law 93-294 (Aviation Career Incentive Act of 1974); DOD Instruction 7730.57, *Aviation Incentive Pays and Continuation Bonus Program;* AFI 11-401, *Aviation Management;* and E.O. 9397, *Numbering System for Federal Accounts Relating to Individual Persons* as amended by E.O. 13478. System of Records Notices F011 AF/XOA, Aviation Resource Management System (ARMS), applies and is available on the DoD Defense Privacy and Civil Liberties Division's web site.  Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System (AFRIMS).

## *SUMMARY OF CHANGES*

This publication contains significant changes.  Tiered waiver authorities (**T**-levels) added, per AFI33-360, on all wing-level and below directives in this instruction. **T-1** and **T-2** require MAJCOM waiver, **T-3** is wing-level (OG/CC) waiverable.  Periodic and End-of-Cycle Training Reports updated to match the RTM.  Added no radar lock night rejoin to MQT sim & flight requirements. Deleted contingency deployment sortie proration.  Intelligence Training added to Chapter 4 and ASC currencies deleted. Landing Recurrency requirements changed.  For SEPTs added landing gear as a major sub-system and listed several required scenarios/situations in the annual SEPT Program.  HTS upgrade for Blk 40-42 updated and separated from HTS/SEAD upgrade.  Changed JHMCS qual training to HMD qual training. Added chase procedures and details to IQT waivers.  Moved one AHC/INSTR sortie per month RAP restriction from Attachment 2 to Chap 1. Hi-AoA Training added.

**Chapter 1**

**GENERAL GUIDANCE**

**1.1. Abbreviations, Acronyms, and Terms.** See **Attachment 1.**

**1.2. Roles & Responsibilities:**

1.2.1. HQ ACC/A3 is designated as the responsible agency for this volume IAW AFPD 11-2, *Aircraft Rules and Procedures*. HQ ACC/A3 will:

1.2.1.1. Chair annual ACC Realistic Training Review Boards (RTRBs) to review ground and flying training requirements/programs for CAF units. RTRB participants will include applicable ACC active and reserve component representatives. MAJCOM/A3s with major weapons systems for which ACC is lead command will be invited to send representatives and/or inputs.

1.2.1.2. Process all change requests.

1.2.2. All user Major Commands (MAJCOMs) will:

1.2.2.1. Determine training requirements to meet expected unit tasking.

1.2.2.2. Submit MAJCOM supplements to HQ USAF/A3OI, through HQ ACC/A3TO, for approval before publication. Provide HQ ACC/A3TO and all applicable MAJCOM/A3s a copy of supplements after publication.

1.2.2.3. Review subordinate unit supplemental instructions and supplemental training programs annually.

1.2.3. Direct Reporting Units (DRUs) will: **(T-2).**

1.2.3.1. Provide standard instructional texts to support operational weapons/tactics training. Forward copies to each MAJCOM, NAF/A3, and to each CAF wing/group.

1.2.3.2. Review, update, and distribute changes to instructional texts annually.

1.2.3.3. Review subordinate unit training programs annually.

1.2.4. Wings/Groups will: **(T-2).**

1.2.4.1. Develop programs to ensure training objectives are met. Assist subordinate units in management of training programs, ensure programs meet unit needs, and provide necessary staff support. ACC wings/groups will also assist ANG and AFRC unit training programs as required/ requested IAW the AFRC unit advisory support program **(T-2).**

1.2.4.2. Attach API-6/8 flyers to a flying squadron **(T-2).**

1.2.4.3. Except when otherwise mandated, designate the training level to which each API − 6 (ARC: all flyers) will train. Upon request provide MAJCOM/A3T (ANG: ACC/A3G, AFRC: ACC/A3U) with a list of Basic Mission Capable (BMC) and Combat Mission Ready (CMR) manning positions. Review programs and manning position designations annually **(T-2).**

1.2.4.4. Forward supplements of this volume and Wing syllabi to MAJCOM/A3T for review each training cycle, or upon significant changes (ANG: to ACC/A3G, AFRC: to ACC/A3H upon request). Review supplements each training cycle **(T-2).**

1.2.5. Squadron supervisor (ARC: Appropriate operations supervisor) will:

1.2.5.1. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned/attached pilots **(T-3).**

1.2.5.2. Review training and evaluation records of newly-assigned pilots and those completing formal training to determine the training required for them to achieve BMC or CMR and to ensure provisions of this instruction have been met **(T-3).**

1.2.5.3. Orient Ready Aircrew Program (RAP) missions to develop combat skills or practice tactical employment relevant to expected unit tasking.  Provide guidance to ensure only effective RAP missions are logged.  See **Attachment 2** for RAP mission definitions **(T-3).**

1.2.5.4. Review qualifications and training requirements of FS/GLO and determine appropriate flight restrictions **(T-3).**

1.2.5.5. Determine missions/events in which individual BMC pilots will maintain qualification versus familiarization **(T-3).**

1.2.5.6. Determine utilization of BMC pilots **(T-3).**

1.2.5.7. Determine how many and which BMC and CMR pilots will carry special capabilities/ qualifications **(T-3).**

1.2.5.8. Identify the levels of supervision required to accomplish the required training, unless specifically directed **(T-3).**

1.2.5.9. Assist the wing/group in developing the unit training programs **(T-3).**

1.2.5.10. Monitor individual assigned/attached pilot currencies and requirements **(T-3).**

1.2.5.11. Ensure pilots only participate in missions, events, and tasks for which they are adequately prepared, trained, and current **(T-3).**

1.2.5.12. Periodic and End-of-Cycle Training Reports. (N/A for CB-coded units and USAFWS)

1.2.5.12.1. Periodic Reporting. Squadrons will submit training reports to HQ ACC/A3TO IAW the current RTM **(T-2).**

1.2.5.12.1.1. Squadrons may submit an out of cycle report at any time if Higher Headquarters (HHQ) assistance is required to prepare for DOC statement mission or deployment taskings.

1.2.5.12.1.2. Ready Aircrew Program (RAP) and Formal Training Unit (FTU) reporting instructions and templates can be found under "RAP & FTU Reporting Tools" on the ACC/A3TO SharePoint.  See current RAP Tasking Message (RTM) for the site.

1.2.5.12.2. End-of-Cycle Reporting. Squadrons will submit an End-of-Cycle Training Report NLT the 15th of October **(T-2).**

1.2.5.12.2.1. Report all deviations from the training requirements in this volume or the RTM at the end of the training cycle. **(T-2).**

1.2.5.12.2.2. Squadrons deployed at the end of the training cycle are still required to submit an End-of-Cycle Report. **(T-2).**

1.2.5.12.2.3. End-of-cycle report guidance and templates can be found at ACC/A3TO SharePoint.  See current RTM for site address.

1.2.6. Individual pilots will:

1.2.6.1. Hand carry all available training records, gradebook, and Flight Evaluation Folders to assist the gaining unit in assessing qualifications and training requirements **(T-3).**

1.2.6.2. Complete training requirements and currencies within the guidelines of this instruction **(T-3).**

1.2.6.3. Participate only in ground and flying activities for which they are qualified, current, and prepared **(T-3).**

**1.3.  Processing Changes:**

1.3.1.  Forward recommendations for change to this volume to MAJCOM/A3 on AF Form 847, *Recommendation for Change of Publication.*

1.3.2.  MAJCOMs will forward approved recommendations to HQ ACC/A3.

1.3.3.  HQ ACC/A3 will:

1.3.3.1.  Coordinate all changes to the basic instruction with all MAJCOM/A3s.

1.3.3.2.  Process recommendations for change after approval by HQ USAF/A3/5.

1.3.3.3.  Address time sensitive changes by immediate action message.

1.3.3.4. MAJCOM/A3 (ANG: ACC/A3G) will determine training requirements for subordinate units.  AFI changes will be issued via revision, Interim Change (IC), or Administrative Change (AC) to this publication.  Due to dynamic requirements of Combatant Commanders, training requirements and currencies may be altered regularly. These training requirements and currency adjustments may be made via RAP Tasking Memorandum.  HQ ACC/A3 will include MAJCOM supplemental guidance in the next publication of the AFI.

**1.4. Training.** Training programs are designed to progress pilots from Initial Qualification Training (IQT) (B-Course or Transition/Requalification Training [TX]), then to Mission Qualification Training (MQT), and finally to Continuation Training (CT).

1.4.1. IQT provides the training necessary to initially qualify pilots in a basic position and flying duties without regard to a unit's mission.  Upon completion of IQT, the pilots attain Basic Aircraft Qualification (BAQ) status.  BAQ is a prerequisite for MQT.  Except for General Officers above wing level, BAQ is not a long term qualification status.  Waiver authority for pilots, other than general officers above the wing level, to remain BAQ is MAJCOM/A3 (ANG: ACC/A3G) **(T-2).**

1.4.2. MQT provides the training necessary to initially qualify or requalify pilots in a specific position and flying duties to perform the missions assigned to a specific unit. Pilots maintain BAQ status until they complete MQT. Completion of MQT or FTU instructor course is a prerequisite for BMC and CMR.

1.4.3. **CT.** There are two aspects of CT. The first consists of pilot training in the basic flying skills contained in the RAP Tasking Memo (RTM)**.** These skills ensure safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions.

1.4.4. **Ready Aircrew Program (RAP).** The CT program is designed to focus training on capabilities needed to accomplish a unit's core tasked missions. Following completion of IQT and MQT, pilots will have received training in all the basic missions of a specific unit unless excepted in **Chapter 3**. Pilots will then be assigned to either a CMR or BMC position.

1.4.4.1. **Combat Mission Ready (CMR).** The minimum training required for pilots to be qualified and proficient in all of the primary missions tasked to their assigned unit and weapons system.

1.4.4.2. All CC-coded unit Regular Air Force (RegAF) API-1 positions, flying SQ/CC and DO positions are designated CMR positions. OG/CCs may designate other API-6 positions not assigned to the flying squadron as CMR. (Exception: If a unit is over-manned, the SQ/CC may elect to train the front line of their Unit Manning Document (UMD) API-1s to CMR and designate the overage BMC. In this case, priority should be given to inexperienced pilots with at least 50 percent, if available, designated CMR). (ARC/TFI: Any pilot may be designated CMR at OG/CC discretion). CMR pilots maintain proficiency and qualification in all core missions of the flying unit to which they are assigned or attached. CMR pilots maintain currencies which affect CMR status, accomplish all core designated flight training (missions and events), and all mission ground training. Failure to complete this training or maintain these currencies results in regression to non-CMR (N-CMR) status unless waived by appropriate authority  **(T-3).**

1.4.4.3. **Basic Mission Capable (BMC).** Pilot accomplishes training required to remain familiarized in all, and may be qualified and proficient in some, of the primary missions of their weapon system and unit. (ARC: Any pilot may be designated BMC at OG/CC discretion).

1.4.4.4. All non-CMR RegAF wing pilot positions are designated BMC positions. BMC designations are assigned to pilots who have a primary job performing wing supervision or staff functions that directly support the flying operation, or are FTU instructors, Weapons School instructors, pilots assigned to active flying billets in units without assigned aircraft (i.e., 549 CTS [Green Flag-West], etc.), or operational test pilots. For those missions in which they maintain familiarization only, BMC pilots must be able to attain proficiency and qualification in 30 days or less. BMC pilots accomplish all mission related ground training designated by their attached SQ/CC. BMC pilots may deploy and may participate in any mission for which they are proficient and qualified, without additional training, as determined by the SQ/CC. Failure to complete BMC required training results in regression to non-BMC (N-BMC) status. AFRC and AFRC TFI BMC training events will be directed by RAP Tasking Memo.

1.4.4.5. BMC pilots assigned to units without assigned aircraft (i.e., 549 CTS [Green Flag-West], etc.) will fly a RAP mix as determined by the unit commander consistent with their unit's tasking.   RAP events and weapon requirements are determined by the unit commander **(T-3).**

1.4.4.6. **N-CMR/N-BMC.** Pilots that regress to N-CMR/N-BMC status will accomplish the requirements in accordance with paragraph **4.10** While N-CMR, pilots may participate in missions, including exercise and contingency, in which they are current and qualified at the discretion of the SQ/CC. **(T-3).**

1.4.4.7. **Specialized Training.** Specialized training is training in any special skill(s) necessary to carry out the unit's assigned missions that is not required by every pilot. Specialized training consists of upgrade training such as FLUG, IPUG, FAC(A), ACA/ONE with TGP/ATP, etc., including CT to maintain proficiency and qualification in unit tasked special capabilities and missions.   Specialized training is normally accomplished after a pilot is assigned CMR/BMC status, and is normally in addition to CMR/BMC requirements. Unless otherwise specified, pilots in CMR or BMC positions may hold special capabilities/qualifications as long as any additional training requirements are accomplished.

**1.5. Training Concepts and Policies:**

1.5.1. Units will design training programs to achieve the highest degree of combat readiness consistent with flight safety and resource availability. Training must balance the need for realism against the expected threat, pilot capabilities, and safety. **(T-3).** This instruction provides training guidelines and policies for use with operational procedures specified in applicable flying/operations publications.

1.5.2. ACC Training Support Squadron (ACC TRSS) will assist OG/CCs in development of training programs when/where tasked by the HQ ACC/A3.  Other MAJCOMs may submit requests for training program support to the HQ ACC/A3.  If validated, these requests will be prioritized and tasked to ACC TRSS.  Designated test units (CB-coded) may develop syllabi to upgrade operational test pilots in support of specific test plans.  These syllabi will be approved by the OG/CC and submitted to ACC TRSS. **(T-2).**

1.5.3. Design training missions to achieve combat capability in squadron tasked roles, maintain proficiency, and enhance mission accomplishment and safety.   RAP training missions will emphasize either basic combat skills or scenarios that reflect procedures and operations based on employment plans, location, current intelligence, and opposition capabilities.  Tactical training will include use of inert and live ordnance, threat simulators, countermeasures, targeting pods, HTS pods and dissimilar aircraft as much as possible. **(T-2).**

1.5.4. **In-flight Supervision:**

1.5.4.1. Unless specifically directed, the SQ/CC determines the level of supervision necessary to accomplish the required training **(T-3).**

1.5.4.2. IPs and FL-qualified SQ supervisors may allow any pilot to lead portions of a mission if appropriately briefed.  This provision will only be used to allow the pilot to

practice events in which he is already qualified or to help determine if the pilot is ready for FLUG.

1.5.4.3. Flight leads may give their wingman the tactical lead for specific tasks.  As a tactical lead, the wingman makes tactical decisions for the flight, but the flight lead retains overall authority and responsibility.

1.5.5.  Experienced Pilot (EXP)

1.5.5.1.  An experienced pilot has one of the following:

1.5.5.1.1.  500 hours F-16, or

1.5.5.1.2.  300 hours F-16 with 1,000 hours (FP/IP/MP), or

1.5.5.1.3.  100 hours F-16 and previously fighter EXPERIENCED.

1.5.5.2. For pilots, fighter time is defined as FP/IP/MP hours logged in aircraft while assigned an AFSC of 11FX.  T-38A/B (ADAIR) and T-38C (IFF) are considered fighter time.

1.5.5.3. Hours logged in the MTC accomplishing RAP Tasking Memo-approved missions will be counted as "hours" when determining experience level.  RAP MTC Mission hours will not exceed 20% of the total required to meet the experienced threshold (ex: 100 RAP MTC Mission hours out of 500 hours F-16 time).  See the current RAP Tasking Memo for guidance on approved RAP MTC Missions and logging procedures  **(T-2).**  AFRC: N/A.

1.5.5.4. WSOs/CSOs must achieve fighter EXPERIENCED while assigned an AFSC of 12F3X or 12F4X.

**1.6.  Ready Aircrew Program Policy and Management:**

1.6.1. The RAP training cycle is 12 months and is aligned with the Fiscal Year.  RAP tasking executed IAW RAP Tasking Memorandum.

1.6.2. Each RAP training level (CMR, BMC & BAQ) is defined by a total number of RAP missions, broken down into simulators, missions, specific weapons qualifications, and associated events as determined by the MAJCOM and unit commander.

1.6.3. The breakout of mission and event types is provided as a guideline to be followed as closely as possible but minor variances (other than increased Red Air allocations for CMR; AFRC: N/A) are authorized.  However, SQ/CCs may still use variations in missions or events as a basis for regression.

1.6.4. An effective RAP training mission requires accomplishing a tactical or building block profile.  Each mission requires successfully completing a significant portion of the relevant events as determined by the SQ/CC, RTM, and **Attachment 2**.

1.6.4.1. Only one RAP training mission may be logged per sortie (day or night) unless separated by AAR.  Each mission on either side of the AAR must stand alone as an effective RAP training mission.  A maximum of three RAP missions per sortie may be logged under these rules **(T-2).**

1.6.5.  The SQ/CC's first priority will be to train all designated pilots to CMR status.  **(T-3).**  CMR status requires:

    1.6.5.1.  A 1-month lookback at the CMR sortie rate (ref paragraph **4.7.1.1** for specifics and further criteria).

    1.6.5.2.  Qualification in all core missions and weapons events required at CMR.

    1.6.5.3.  Confirmation that CMR pilots can complete the prorated number of sortie/event requirements remaining by the end of the training cycle.

    1.6.5.4.  Completion of mission-related ground training, to include a current verification or certification.

1.6.6.  Progression from BMC to CMR requires:

    1.6.6.1.  A 1-month lookback at the CMR rate.

    1.6.6.2.  Qualification in all core missions and weapons events required at CMR.

    1.6.6.3.  Completion of mission-related ground training, to include a current verification or certification.

    1.6.6.4.  Squadron CC certification.

1.6.7. SQ/CCs will determine and assign pilots that will train for and maintain special capabilities or qualifications  **(T-3).**  Special capability/qualification mission and event requirements are normally accomplished in addition to baseline CMR/BMC requirements except for mission commander and flight lead training.

1.6.8.  End of Cycle training requirements are based on the pilot's experience level on the last day of the current training cycle.

1.6.9.  Units converting to another MDS may fly pilots in CMR positions at the BMC rate if CMR sortie rates cannot be supported.  One month prior to the operationally ready date, CMR pilots will be flown at a CMR rate.  RegAF wings converting to new MDS are authorized one SQ equivalent (7/6 for 24/18 or less PAI) of additional API-6s during the conversion period.  However, total wing staff flying the new aircraft shall not exceed new authorized total **(T-2).**

**1.7.  Training Sortie Program Development:**

1.7.1. RAP mission and event requirements (see **Attachment 2**) apply to CMR and BMC pilots including those carrying special capabilities or qualifications.  They are IAW the RAP tasking memo which specifies the total RAP training cycle mission requirements.  RAP Lookback and Mission requirements are published in Tables 5.a. and 5.b. of the current Rap Tasking Memorandum**.**  It establishes the minimum number of missions required for BMC and CMR levels.  The RAP tasking memo takes precedence over this instruction and may contain updated requirements and events not yet incorporated in **Attachment 2**. **(T-2).**

1.7.2. Navigation sorties will be programmed for API-1 pilots. **(T-3).**  These sorties ensure that pilots maintain their skills necessary to operate safely in the civil airspace environment.

1.7.3. Experiencing sortie requirements must be considered when developing unit flying hour programs. **(T-2).**

1.7.3.1. Experiencing sorties are additional training sorties necessary to achieve desired proficiency in optimum time. RAP missions may not provide sufficient hours to experience pilots to achieve overall unit experience levels.

1.7.3.2. Collateral sorties are not directly related to combat employment training but are necessary in day to day unit operations. These include, but are not limited to, functional check flights, ferry flights, incentive/orientation flights, deployments, and air shows. Additional hours are allocated for these purposes, based on the current fiscal environment.

1.7.4. **(Non-effective sorties are allocated to unit flying hour programs to compensate for non-effective training sorties, based on the current fiscal environment. Non-effective sorties are logged when a training sortie is planned, but a major portion of valid training for that type of mission is not accomplished due to poor weather, IFE, adversary fallout, etc. For CMR and BMC pilots, (N/A AFRC)** non-effective sorties will be logged (and not counted toward RAP totals) when Red Air allocations are exceeded during a training cycle. Only 1 AHC or Instrument sortie may be applied to monthly lookback for any given month. For example, if an instrument sortie is flown during a particlar month, an AHC sortie flown that same month cannot be counted towards monthly lookback. It will be logged as Excess AHC. Excess Instrument sorties will be logged as Excess Instrument in ARMS **(T-2).**

**1.8. Training Records and Reports.**

1.8.1. Units will maintain pilot records for individual training and evaluations IAW: **(T-2).**

1.8.1.1. AFI 11-202V1, *Aircrew Training.*

1.8.1.2. AFI 11-202V2, *Aircrew Standardization/Evaluation Program.*

1.8.1.3. AFI 11-401, *Aviation Management.*

1.8.2. Units will track the following information for all pilots (as applicable): **(T-2).**

1.8.2.1. F-16 specific ground training (not Ancillary Training).

1.8.2.2. Requirements and accomplishment of individual missions and events cumulatively for the training cycle.

1.8.2.3. RAP requirements and accomplishment using 1-month and 3-month running totals for look-back.

1.8.2.4. Currencies.

1.8.2.5. Weapons employment qualification requirements in sufficient detail to document all employment attempts and hit/miss percentages in a COTS database of choice.

1.8.3. Units will maintain a training folder for each assigned aircrew to include the following information: **(T-2).**

1.8.3.1. Current aircrew qualifications and upgrade training programs.

1.8.3.2. Letter of qualification from previous unit (if applicable).

1.8.3.3. Documentation for completion of any specialized training programs from AFI 11-2F-16, Volume 1, while assigned to the unit.

1.8.4. Unit training folders will be forwarded to the gaining unit when the aircrew has a permanent change of station **(T-3).**

**1.9. Pilot Utilization Policy:**

1.9.1. Commanders will ensure that wing/group tactical pilots (API-1/6s) fill authorized positions IAW unit manning documents and that pilot status is properly designated.  The overall objective is that pilots perform combat-related duties.  Supervisors may assign pilots to valid, short-term tasks (escort officer, FEB/mishap board member, etc.), but must continually weigh the factors involved, such as level of pilot tasking, flying proficiency, currency, and experience.  For inexperienced pilots in the first year of their initial operational F-16 assignment, supervisors will limit the non-flying duties to those related to combat activities **(T-3).**

1.9.2. Duties required by various publications that may be assigned to CAF API-1 pilots are weapons and tactics officer, programmer, flight safety officer, SOF, mobility/contingency plans, training (except ARMS documentation), SQ Standardization/Evaluation Liaison Officer (SELO), aircrew flight equipment officer, electronic combat officer, and other duties directly related to flying operations.  In some instances, such as squadron-assigned flying safety officers, API-1s may be attached to the wing.  API-1s will not be attached to wing staffs or man wing staff positions unless total wing pilot API-1 manning is 100 percent or better.  CCs will ensure wing staff pilots (API-6s) perform duties justified in MAJCOM manpower standards documents and authorized in UMDs **(T-3).**  AFRC: OG/CC may designate API positions as required to meet unit.requirement.

**1.10. Sortie Allocation Guidance:**

1.10.1. Inexperienced API-1 pilots will receive sortie allocation priority over experienced pilots. **(T-3).**  Priorities for sortie allocation are as follows:

1.10.1.1. **Operational Units.** CMR API-1, MQT API-1, CMR API-6, MQT API-6, BMC (API- All), API-5 pilot physicians.

1.10.1.2. **Combined Formal Training and Operational Units.** Formal syllabus training, CMR/API-1, MQT API-1, CMR API-6, MQT API-6, BMC (API-All), API-5 pilot physicians, others.

1.10.1.3. **Formal Training Units and USAFWS .** Formal syllabus training, Instructor Upgrade, Instructor CT, authorized staff personnel not performing Instructor or FE duties (to include API-5 pilot physicians not on instructor orders).

1.10.1.4. **Test and Test Evaluation Squadron (TES) Units.** Requirements directed by MAJCOM, training required to prepare for assigned projects/tasking, BMC training requirements that cannot be accomplished on primary missions, API-5 pilot physicians.

1.10.2. Wing API-6 authorizations are IAW unit manning documents.

1.10.3. For FTU-only wings, all API-6 pilots will maintain instructor status (optional for WG/OG CC, FCF pilots, and one other).  These wings will fly API-1/6 pilots as required by PFT.  For wings consisting of both FTU and operational units, at least one of the following pilots will maintain formal IP status:  WG/CC, WG/CV, OG/CC, OG/CD  **(T-3).**

1.10.4. API-8 rated personnel flying authorizations, MAJCOM/IGS inspectors in API-6 billets,  and Test Unit pilots will be IAW AFI 11-401 and MAJCOM guidance **(T-2).** API-8 pilots will fly the BMC sortie rate, however they are not required to complete BMC specific missions/events or meet monthly lookback requirements **(T-3).** Test unit pilots will fly the BMC sorite rate as a minimum and should meet monthly BMC lookback **(T-3).** SQ/CCs will direct additional sorties if syllabus or test missions provide insufficient pilot proficiency training **(T-3).** Units will provide assigned API 6/8 flyers adequate resources to maintain minimum training requirements.  However, API-6 flyer support will not come at the expense of the flying squadron's primary mission. **(T-3).**  API 6 flyers will accomplish basic skills events with allotted BMC sorties. **(T-3).** API-8 IGS flyers will strive to accomplish basic skills events with allotted BMC sorties.  If attached units cannot meet attached flyer requirements, they must request relief IAW AFI 11-401, as supplemented.  **(T-2).** Units requiring flying hour adjustments for attached API-8 and applicable API-6 flyers must request program changes through their MAJCOM.  **(T-2).**

**Chapter 2**

**INITIAL QUALIFICATION TRAINING**

**2.1. General.** This chapter outlines Initial Qualification Training (IQT) of pilots into the F-16. IQT includes Basic (B-Course) and Transition/Senior Officer (TX-Course) training for pilots not previously qualified in the F-16 and will normally be conducted during formal syllabus courses at a Formal Training Unit (FTU) squadron whenever possible.  Graduates of F-16 FTU will be proficient in air-to-air and air-to-ground mission tasks as indicated by the Training Task List/Course Training Standards (TTL/CTS) of the FTU syllabus. Students will graduate current and qualified in ACBT, LASDT CAT I (500 feet), NVG, TGP, weapons employment qualification (GP, LGBs, IAMs, NVG HAS; EO - Fam), and receive block differences training as required by next assignment.

**2.2. Approval/Waiver for IQT.** In exceptional circumstances, when FTU training is not available within a reasonable time period, IQT may be conducted at the local unit IAW provisions of this chapter.  This local IQT will normally be conducted using appropriate formal USAF Transition or Requalification Training Course syllabus tracks, flow programs, and requirements.  When local IQT is authorized, the gaining MAJCOM assumes responsibility for the burden of providing this training locally.  The following guidance applies only to other than formal course IQT.

2.2.1. MAJCOM/A3 (ANG:NGB/A3O) is approval authority to conduct local IQT, and is waiver authority to change the formal requirements of locally conducted IQT (ANG: ACC/A3G).  Info MAJCOM/A3T **(T-2).**

2.2.2. MAJCOM/CC (ANG: ACC/CG) is the approval authority for non-formal course IQT for Colonel selectees and above to be conducted at the unit to which the officer is assigned **(T-2).**

2.2.3. Units must submit a waiver request to conduct local IQT if the pilot has been unqualified for greater than 12 months.  Requests to conduct local IQT will include the following: **(T-2).**

2.2.3.1.  Justification for the local training in lieu of formal course training.

2.2.3.2.  Summary of individual's flying experience to include last centrifuge training date.

2.2.3.3.  Date training will begin and expected completion date.

2.2.3.4. Complete syllabus to be executed locally to include rationale for any changes/exceptions to applicable formal course syllabus.

2.2.4. Successful completion of IQT requires the upgrading pilot to complete an aircraft INSTM/QUAL evaluation IAW AFI 11-202V2 (AFI 11-2F-16V2).

**2.3. Prerequisites.** Course prerequisites will be IAW the appropriate formal course syllabus and the USAF Education and Training Course Announcements (ETCA) **(T-2).**

**2.4. Ground Training.** Ground training may be tailored to the individual's background and experience or peculiar local conditions.  However, available and current reference materials such

as AFTTP 3-3.F-16, AFTTP 3-1.F16, Operational Test Reports and Tactical Bulletins, instructor guides, and audiovisual programs, should be used as supporting materials to the maximum extent possible. Simulator missions will be accomplished in the best simulator available.

**2.5. Flying Training:**

2.5.1. Mission sequence and prerequisites will be IAW the appropriate formal course syllabus **(T-2).**

2.5.2. Training will be completed within the time specified by the syllabus, as approved. Failure to complete within the specified time limit requires notification through MAJCOM/A3T to MAJCOM/A3 (ANG: ACC/A3G) with pilot's name, rank, reason for delay, planned actions, and estimated completion date **(T-2).**

2.5.3. Pilots in IQT will fly under IP supervision (dual or chased) until completing the INSTM/QUAL evaluation **(T-2).**

2.5.4. Formal course syllabus mission objectives and tasks are minimum requirements for IQT. However, additional training events, based on student proficiency and background, may be incorporated into the IQT program with authorization of the SQ/CC. Additional training due to student non-progression is available within the constraints of the formal course syllabus and may be added at the discretion of the SQ/CC.

**2.6. IQT for Senior Officers:**

2.6.1. All formal training courses for senior officers (colonel selectees and above) will be conducted at FTUs unless waived IAW paragraph **2.2 (T-2).**

2.6.2. Senior officers must meet course entry prerequisites and will complete all syllabus requirements unless waived IAW syllabus directives and paragraph **2.2.2 (T-2).**

2.6.3. If senior officers must be trained at the base to which they are assigned they will be in formal training status. Unit duties will be turned over to appropriate deputies or vice commanders until training is completed. Exceptions to this policy must be approved by MAJCOM/CC (ANG: ACC/CG) **(T-2).**

**Chapter 3**

**MISSION QUALIFICATION TRAINING**

**3.1.  General.**  Mission Qualification Training (MQT) is a unit developed training program that upgrades newly assigned B or TX course graduates to BMC/CMR to accomplish the unit mission.  The culmination of initial MQT is an evaluation IAW AFI 11-2F-16V2.  For other newly assigned pilots, MQT-LAO, SIM MQT-1 LAO/Instruments, and appropriate theater-specific ground training events are the minimum requirements.  Guidance in this chapter is provided to assist SQ/CCs in executing an OG/CC approved MQT program.  Units are expected to further tailor their programs based on current qualification, experience, currency, documented performance, and formal training.  Applicable portions of MQT may be used to create a requalification program for pilots who have regressed from BMC/CMR to specifically address deficiencies which caused regression.

3.1.1.  MQT will be completed within 90 calendar days (ARC: 120 calendar days).  Timing starts at the pilot's first duty day at the gaining operational unit.  If a pilot elects to take leave prior to entering MQT, the timing will begin after the termination of the pilot's leave.  Training is complete upon SQ/CC certification to CMR/BMC.  Notify MAJCOM/A3T if delay beginning MQT due to security clearance exceeds 30 days.  If training exceeds the specified limit, units will notify MAJCOM/A3T (ANG: ACC/A3G)  **(T-2).**

3.1.2.  The following CMR/BMC training items are granted grace periods for completion after MQT: AAR and night training may be accomplished NLT 90 days (ARC: 180 days) from completion of MQT.  Failure to comply will result in regression to N-CMR/N-BMC until training is complete.  AAR and night training accomplished in IQT may fulfill MQT requirements as determined by the SQ/CC. Night training events require demonstrated proficiency and currency in similar day events, unless accomplished dual with an IP. **(T-2).**

3.1.3.  Pilots in MQT will not fly in FLAG-level exercises or Weapons School support sorties **(T-1).**

3.1.4.  Prior to BMC/CMR certification, if not accomplished during FTU training, pilots must complete initial Weapons Employment Qualification IAW **Chapter 5** and RAP tasking memo **(T-2).**

**3.2.  Ground Training:**

3.2.1.  Units will develop blocks of instruction covering areas pertinent to the mission as determined by the SQ/CC  **(T-3).** Training accomplished during IQT may be credited towards this requirement.

3.2.2.  Pilots transferring from another MAJCOM require region-specific airspace procedures academics before flying **(T-3).**

3.2.3.  **Initial Verification:** (N/A CA/CB/TF-coded units):  Initial verification will be completed within 90 days (ARC: 180 days) after completing MQT  **(T-2).** Each pilot (not required for BMC) will demonstrate to a formal board a satisfactory knowledge of the squadron's assigned mission. **(T-2).**  Board composition will be established by the SQ/CC.  Desired composition is SQ/CC or SQ/DO, weapons, electronic combat, intelligence, and plans representatives.

**3.3.  Simulator Training:**

3.3.1.  SIM MQT profiles will be accomplished in the best available simulator.  SIM MQT-1 is a prerequisite for the first MQT flight.  Locally directed simulator missions will concentrate on squadron tasking and unique capabilities. **(T-3).**  AFRC: Any SIM requirements or events can be waived or replaced with flying training as required by SQ/CC.

3.3.2.  **SIM MQT--Local Area Orientation/Instruments.** Normal ground operations, standard departure(s), navigation, emergency airfield procedures and approaches, published penetration and approach to primary alternates and home base, emergency divert procedures, EPs.

3.3.3.  **SIM MQT-Day/Night Air-to-Air Procedures.** Trail departure (no radar lock night rejoin), intercepts, EC equipment operation, threat detection and defensive reactions, switchology, emergency procedures, TGP employment, NVG operations, and weapons employment IAW squadron UCML**.**

3.3.4.  **SIM MQT--Day/Night Air-to-Surface Procedures.** Heavyweight takeoff, weapons deliveries, jettison procedures, EC equipment operation, threat recognition and defensive reactions, local range procedures, emergency divert procedures, hung ordnance procedures, TGP employment, NVG operations, and weapons employment IAW squadron UCML.

**3.4.  Flying Training.** The appropriate missions from those listed below will be used to upgrade to BMC or CMR.  Unit-developed MQT programs will use profiles typical of squadron missions. **(T-3).** Maximum use of armament recording assets and captive missiles is encouraged on all MQT missions.

3.4.1.  **Supervision.** A FL-qualified SQ supervisor or IP is required unless specified otherwise.  The SQ/CC will determine the proper flight position of the supervisor/IP unless specified otherwise.  **(T-3).**

3.4.2.  If more than 14 calendar days elapse between sorties, an additional review sortie will be flown before continuing in the program **(T-3).**

3.4.3.  All pilots must conduct practice airborne emergency procedures training during any one of the MQT sorties.  As a minimum, the training will consist of briefing, flying, and debriefing a simulated critical action procedure scenario to include airborne communication with the SOF **(T-2).**

3.4.4.  **Sortie Requirements.** The sorties listed in paragraphs **3.4.5**, ACBT Qualification, and **3.4.6** Air-to-Surface Training, are suggested mission profiles that the SQ/CC may use to develop the unit's MQT program based on unit tasking.  Supervision will be an IP or FL-qualified SQ supervisor.  Pilots will demonstrate proficiency in the following additional minimum events during MQT: Trail departure, no radar lock night rejoin, Instrument approach (precision and non-precision), and Radar Trail Arrival  **(T-3).**

3.4.4.1.  **MQT-LAO--Mission Objectives.** Practice local area orientation, local instrument procedures, airspace/range familiarization, and emergency airfield(s) overflight/approaches.  B/TX course graduates may combine with MQT-AHC.

3.4.4.2.  **Mission Evaluation Checkride (If Required).** This sortie will be flown IAW AFI 11-202V2 and local standardization/evaluation criteria on a mission representing the unit's primary mission tasking **(T-2).**

3.4.5. **ACBT Qualification.** The following sorties (in sequence) will be used to become ACBT qualified **(T-3).** Units may expand this program to achieve desired proficiency or capability. ACBT programs for pilots with previous fighter experience may be individually tailored based on experience, currency, and documented performance. If both 4 v X TI and ACT rides were accomplished during FTU, then an FTU graduate meets the requirements of having initial ACBT Qualification, but they may require an ACBT recurrency during MQT at their operational squadron.

3.4.5.1. **MQT-Aircraft Handling Characteristics (AHC)--Mission Objectives.** Familiarize the pilot with aircraft maneuvering capabilities and limitations, by practicing advanced handling maneuvers. Specific Mission Tasks: High AOA/low speed horn recovery, vertical recovery, high and low speed turn rate/radius maneuvers, acceleration demonstrations.

3.4.5.2. **MQT-(D)BFM--Mission Objectives.** Demonstrate proficiency in basic fighter maneuvering skills. Specific Mission Tasks: Tactical formation, ranging exercises, A/A weapons employment, offensive, defensive and high aspect setups.

3.4.5.3. **MQT-(D)ACM--Mission Objectives.** Demonstrate proficiency in element A/A maneuvering. Specific Mission Tasks: Offensive/defensive setups, A/A weapons employment, engaged / supporting fighter roles and responsibilities.

3.4.5.4. **MQT-(D)ACT--Mission Objectives.** Demonstrate proficiency in element A/A employment. Specific Mission Tasks: Tactical formation, A/A weapons employment, defensive reactions, reforms/resets, disengagement/egress.

3.4.6. **Air-to-Surface Training:**

3.4.6.1. **MQT-SAT(Blk 25-42)/SEAD(Blk 50-52)--Mission Objectives.** Demonstrate proficiency in A/G employment. Specific Mission Tasks: Intel scenario and mission planning, opposed ingress, threat detection and reactions, (Blk 25-42: first-run attacks, TGP and weapons employment IAW squadron UCML), (Blk 50-52: HTSP and weapons employment), safe recovery procedures.

3.4.6.2. **MQT-CAS--Mission Objectives.** Demonstrate proficiency in A/G employment. Specific Mission Tasks: GLO/ Intel scenario and tactical mission planning, Engagement under the control of a JTAC or FAC(A) (actual or simulated), TGP and weapons employment IAW squadron UCML.

3.4.6.3. **MQT-Night 4-Ship Employment--Mission Objectives.** Demonstrate proficiency in Unit specific missions. Achieve 4-ship NVG wingman qualification.

**3.5. Initial Aircrew Chemical Defense Training (ACDT).** (N/A for CA/CB/TF-coded and ANG ADF units) Designed to ensure pilot proficiency in the overall use of the Aircrew Chemical Defense Ensemble (ACDE) and to familiarize pilots with combat capabilities while wearing ACDE. Pilots must complete Initial ACDT NLT 90 days (ARC: 180 days) from MQT completion **(T-2).** Initial ACDT affects CMR/BMC, but is non-grounding. All initial ACDT is to be accomplished prior to the first ACDE flight **(T-2).** Pilots will be ACDE certified upon the completion of initial ACDT. Pilots who accomplished initial ACDT in previous tours in a fighter type MDS are not required to reaccomplish the ACDE Flight.

3.5.1. **Ground Training.** Pilots will accomplish initial Aircrew Chemical Defense Training/ACDT (LL04) and CT refresher thereafter.  Egress Training with ACDE (LL05) IAW AFI 11-301V1 *Aircrew Flight Equipment (AFE) Program* and Emergency Parachute Training with ACDE (SS09) IAW AFI 16-1301 *Survival, Evasion, Resistance, and Escape Program* will be accomplished once in a career (per MDS). **(T-2).**

3.5.2. **Aircrew Chemical Defense Ensemble (ACDE) Simulator.**  A simulator mission in full ACDE gear (anti-exposure suit not required), harness, and G-suit.  Within the mission profile, practice doffing simulated contaminated equipment.  An ACDE simulator can count toward EP or TAC SIM requirements if an appropriate scenario is flown.   Units will use their best available simulator for ACDE simulator training.  The ACDE SIM is accomplished only once per MDS, and will be conducted as close as possible to the first ACDE (CW) flight (but not more than 30 days prior). **(T-3).**

3.5.3. **Aircrew Chemical Defense Ensemble (ACDE) Flight.** The ACDE flight will be accomplished once in a career (unless previously accomplished in a fighter type MDS).  Flight training must consider limitations of operating while wearing ACDE.  Full donning and doffing procedures/sequence will be practiced in conjunction with the ACDE flight but the only ACDE worn in-flight will be mask, filter pack, and gloves **(T-2).**

3.5.4. **ACDE Flight Restrictions:**

3.5.4.1. Pilots will be fully current and qualified in an event prior to accomplishing that event on an ACDE flight **(T-2).**

3.5.4.2. Minimum formation spacing is route unless fingertip is required for safe mission accomplishment (i.e., WX penetration) **(T-3).**

3.5.4.3. Minimum altitude is 500 feet AGL except takeoffs, approaches and landings **(T-3).**

3.5.4.4. No ACBT or night sorties. AAR requires an IP in the flight **(T-3).**

3.5.4.5. Weather minimums are 1,500 feet ceiling and 3 miles (4.8 km) visibility for pilots wearing ACDE **(T-3).**

3.5.4.6. Dual cockpit operations will be used to the maximum extent possible with a safety observer, qualified in the aircraft, not wearing ACDE in the rear cockpit. Solo operations will be supervised by an ACDE qualified FL from a chase position. Formations, to include chase, are limited to two-ship and only one pilot in the element will be wearing ACDE unless both aircraft are dual with an experienced pilot in each RCP.  Pilots wearing ACDE gear will not fly in dissimilar formations **(T-3).**

3.5.4.7. Operations supervision will not conduct ACDE flight training when, in their judgment, temperature/dew point conditions are not favorable to safe operations. **(T-3).**

**3.6.  Flight Surgeon (FS) and Ground Liaison Officer (GLO) Training:**

3.6.1. **Ground Training.** Flight Surgeons and GLOs who are assigned to tactical units and who have not previously flown the unit-assigned aircraft will accomplish the following before the initial flight briefing: Aircraft general review, hanging harness training (as applicable), egress training, protective equipment training, AGSM training, and an instrument/EP simulator (optional) with a CMR/BMC pilot **(T-2).**

3.6.2. **Flight Training**.  The first flight in the unit-assigned aircraft will be with an IP and may be flown in conjunction with other training sorties.  The briefing and sortie will emphasize stick/throttle interferrence avoidance, communications and equipment, tactical display interpretation, and the aircraft's performance envelope **(T-3).**

**Chapter 4**

**CONTINUATION TRAINING**

**4.1. General.** This chapter outlines ground and flying training requirements for CMR, BMC, and BAQ pilots. Pilots must be qualified IAW AFI 11-401, AFI 11-2F-16V2, and AFI 11-202 V1/V2. Additionally, they must complete IQT to fly in BAQ status, MQT or FTU IP upgrade to fly in BMC status, or MQT to fly in CMR status **(T-2).**

**4.2. Ground Training.** Ground training will be accomplished IAW the ground training table in the RTM **(T-2).** Waiver authority for the ground training specified is IAW the reference directive. Ground training accomplished during IQT/MQT will be credited toward CT requirements for the training cycle in which it was accomplished. This list is intended to be a single source reference for F-16 specific ground training only, which will be tracked in ARMS. This list does not include non-F-16 specific ancillary training (e.g., SABC, IA training) which should not be tracked ARMS. Where discrepancies exist, the reference directive takes precedence.

4.2.1. **Simulator (SIM):** The event requirements in the most current RTM depict the minimum EP and TAC SIM training requirements to be accomplished in best available simulator. SQ/CC will determine the required supervision for CT SIM missions, based on SIM capabilities, and mission training objectives. Units will develop scenarios that cover both EP and TAC SIM missions based on expected employment tasking and general systems knowledge requirements **(T-3).** Emphasis will be placed on training not readily attainable during daily flying activities. Units will review scenarios each training cycle and update as required **(T-3).** Pilots may receive credit for training accomplished in special SIM devices or HHQ-directed simulator test support, etc., if approved by the SQ/CC (AFRC: N/A).

4.2.1.1. During EP SIM missions, training in the following areas will be accomplished each training cycle: unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, controlled and uncontrolled ejection parameters, aircraft subsystem failure checklist procedures, relevant critical action procedures, and precision instrument procedures **(T-2). Note:** Pilots may satisfy EP SIM requirements by accomplishing or administering INSTM/QUAL EP Evaluations (EPEs).

4.2.1.2. During TAC SIM missions, training in the following areas will be accomplished each training cycle: AEF and DOC relevant simulated combat employment, threat recognition/reactions and counter tactics, aircraft subsystem failure checklist procedures, relevant critical action procedures **(T-2). Note:** Pilots may satisfy TAC SIM requirements by accomplishing or administering MSN EPEs.

4.2.2. **Situational Emergency Procedures Training (SEPT).**

4.2.2.1. This training is not an evaluation, but a review of abnormal/emergency procedures and aircraft systems operations/limitations during realistic scenarios. One pilot will present a situation and another discusses actions necessary to cope with the malfunction and carry it to a logical conclusion. Critical Action Procedures (if applicable) and squadron special interest items will be emphasized. Incorporate the following elements into squadron SEPT training programs: **(T-2).**

4.2.2.1.1.  Unless dictated otherwise by the OG/CC, SEPTs are designed and released by OGV with optional inputs by OG/CC or Squadron Leadership.

4.2.2.1.2.  Develop SEPT scenarios using actual mishaps/incidents as baseline cases. Besides major EPs, include other less expected emergencies in critical phases of flight such as uncorrectable single brake failure during landing.

4.2.2.1.3.  Discuss at least one EP for each major subsystem (engine, electrical, hydraulic, fuel, landing gear, flight control and auxiliary power as applicable) in each session.  The EPs will also span all phases of flight to include the role of supporting a fighter that has an emergency (checklist backup, ATC coordination and flight path clearance).  For at least one emergency, discuss considerations for handling that emergency at night.

4.2.2.1.4.  Ensure each of the following appear at least once in the annual SEPT Program (included in at least one of the monthly SEPT profiles): in-scenario touch and go (due to RCR, vehicle on RWY, canopy pooling at or near touch down, etc.), NVG SEPT with Unusual Attitudes, Horn Awareness and recovery with wing tanks, break-X interpretation and appropriate actions, and departure of prepared surface above taxi speed.

4.2.2.1.5.  Accomplish two SEPTs each training cycle with an IP or SQ supervisor to include minimum fuel and emergency divert training.

4.2.2.2.  SEPT training will be accomplished each calendar month, and the currency will expire at the end of the following month.  Pilots with an expired SEPT are grounded until subsequently complete **(T-2).**

4.2.2.3.  SEPTs will be accomplished in the best available simulator.  If a simulator is not available, accomplish as one-on-one or in small flight-sized groups as long as all members participate fully and share equal time responding to emergency situations. **(T-2).**

4.2.2.4.  Completion of a simulator EP profile satisfies the monthly SEPT requirement. For an IP/FE administering the SEPT/EP Sim, this will satisfy their SEPT requirement.

4.2.2.5.  Formal course student SEPTs may satisfy the monthly SEPT requirement for the IP whom administers this training.

4.2.3.  **Weapons/Tactics Academic Training.** Units will establish a weapons/tactics academic training program to satisfy MQT and CT requirements. Training is required in each training cycle.  Audio-visual programs may be used in place of academic instruction. The program will require successful completion of an examination (85 percent minimum to pass). Use testing to validate qualification to the maximum extent possible throughout the training program. Pilots successfully scoring 85 percent or greater may be given training credit in lieu of ground CT, where authorized by the governing publication **(T-2).**

4.2.3.1.  Academic instructors will be USAFWS graduates or have attended the applicable academic portion(s) of school, if possible. **(T-3).**

4.2.3.2.  Instruction and tests will include (as applicable), but are not limited to:  **(T-3)**

4.2.3.2.1. Air-to-Air and Air-to-Ground weapons description, operation, parameters, fusing, limitations, preflight, tactics, normal and emergency procedures/techniques.

4.2.3.2.2. ACBT. Principles of aerodynamics, maneuverability, AHC, formations, signature management, flow priorities, tactical intercept principles, visual merge mechanics and execution, alert procedures and scrambles, use of GCI/AWACS, and enemy capabilities.

4.2.3.2.3. Electronic combat equipment, capabilities, operation, checks, procedures, IRMD/ RMD, countermeasures, and hostile EW tactics.

4.2.3.2.4. Specialized training to support specific weapons, tactics (to include threat VID tactics), mission capabilities, authentication, ACA with TGP/ATP, wartime ROE, and safe passage.

4.2.3.2.5. Low altitude flying academics review IAW the outline in paragraph **6.12.6**, LASDT Ground Training.  LASDT/Intercepts/ACA/ONE with TGP/ATP.

4.2.4. **Intelligence Training**.  Intelligence personnel develop an intelligence training program IAW AFI 14-202V1 and AFI 14-2F-16V1.  The intelligence training program will be developed in coordination with the unit's weapons and tactics training program.  The focus and extent of academic training will be determined by the OG/CC and will be aligned with projected wartime tasking, threats, and unit equipage.  Supervisory personnel above squadron level maintaining mission qualification do not require this item **(T-2).**

4.2.4.1. The intelligence training plan will be specifically tailored to meet unit/mission requirements.  Each item will be taught at least once during the annual training cycle.  Training categories include but are not limited to threat knowledge, visual recognition (VR), collection and reporting (C&R), and personnel recovery (PR).

4.2.4.2. Threat Knowledge.  Threat knowledge training is tailored to the unit mission, local area, deployment base(s), and forward operating locations and is concentrated on threats in selected countries with the potential for direct unit involvement.  Training methods may include, but are not limited to, threat-of-the day briefings, weapons and tactics academics, theater orientation briefings, weapons system videos, etc.

4.2.4.3. Visual Recognition.  VR training is tailored to the unit mission, local area, deployment base(s), and forward operating locations.  IT will include enemy/adversary, friendly or neutral weapon systems relevant to the prospective operational environment.  Training will teach how to describe threats to assist intelligence personnel in positive identification and include examples of weapons employment to illustrate how threats might appear when employed.

4.2.4.4. Collection and Reporting.  C&R training enables aircrew to initiate aircrew originated reports; Inflight Report (INFLTREP), and Communication Instructions Reporting Vital Intelligence Sighting (CIRVIS).  Training will familiarize them with the information requirements of the intelligence-generated Mission Report (MISREP) and Intelligence Report (INTREP).  A critical component of C&R training will be the unit's essential elements of information (EEI).  Training will identify and describe theater-specific and peacetime reporting requirements. **(T-2).**

4.2.4.5. Personnel Recovery.  When assigned, a SERE specialist will conduct PR operational support training.  If intelligence personnel do provide PR operational support training it will address:  PR materials (Isolated Personnel Report (ISOPREP) maintenance and review, evasion plan of action (EPA) preparation) and theater combat recovery procedures. **(T-2).**

4.2.5. **Verification:**

4.2.5.1. Continuation verification updates pilots on their squadron's wartime mission. Each pilot will participate in a squadron initial/CT verification as a briefer, board member, or seminar participant **(T-2).** Pilots who participate in a unit deployment to a tasked AOR may receive credit for continuation verification.

4.2.5.1.1. BMC pilots will accomplish an initial verification and/or participate in a CT verification to facilitate future upgrade to CMR status, at the discretion of the SQ/CC. **(T-3).**

**4.3. Flying Training.** All pilots, except API-8 and MAJCOM/IGS inspectors, will accomplish the requirements shown in the Basic Skills requirements table published in the current RTM **(T-3).** Failure to accomplish these requirements may not affect BAQ, BMC, or CMR status but may require additional training as determined by the SQ/CC.  API-8 flyers and MAJCOM/IGS inspectors will strive to accomplish the requirements as shown on this table.  In addition, the following are required:

4.3.1. **Basic Aircraft Qualification (BAQ) Requirements:  (T-2).**

4.3.1.1.  Instrument Qualification Evaluation IAW AFI 11-202V2.

4.3.1.2.  Currencies (as applicable) IAW paragraph **4.6**

4.3.1.3.  BAQ pilots will fly a supervised sortie (squadron supervisor or IP) at least once every 60 calendar days.  In addition, if a BAQ pilot does not fly for 21 days (inexperienced) or 30 days (experienced), the next sortie must be flown with a squadron supervisor or an IP.

4.3.1.4.  BAQ pilots that remain in BAQ status for more than 6 months will be grounded (except General Officers), unless currently enrolled in a program to achieve CMR/BMC.

4.3.2. **Basic Mission Capable (BMC) Requirements:  (T-2).**

4.3.2.1.  Mission Evaluation IAW AFI 11-202V2.

4.3.2.2.  Currencies (as applicable) IAW paragraph **4.6**

4.3.2.3.  Ground training requirements related to applicable RAP missions/events.

4.3.2.4.  Sortie rate (lookback) IAW the current RTM and paragraph **4.7.1** (N/A API-8s and MAJCOM/IGS Inspectors).

4.3.2.5.  RAP sorties, mission types, and events, including weapons qualifications IAW the procedures set forth in this volume and the RTM.

4.3.2.6.  LASDT Category I certification.

4.3.3. **Combat Mission Ready (CMR) Requirements:  (T-2).**

4.3.3.1.  Performance satisfactory to the SQ/CC.

4.3.3.2.  Mission Evaluation IAW AFI 11-202V2.

4.3.3.3.  Sortie rate (lookback) IAW current RTM and paragraph **4.7.1**

4.3.3.4.  RAP sorties, mission types, and events, including weapons qualifications IAW the procedures set forth in this volume and the MAJCOM RAP tasking message.

4.3.3.5.  Currencies (as applicable) IAW paragraph **4.6**

4.3.3.6.  LASDT Category I certification.

4.3.3.7.  Ground Training IAW the RTM.

4.3.3.8.  Verification IAW paragraph **4.2.4**

4.3.4.  **Special Capabilities/Qualification Requirements:  (T-2).**

4.3.4.1.  Specialized training IAW **Chapter 6** or locally directed syllabi.

4.3.4.2.  Mission/event requirements IAW the RAP tasking message.

4.3.4.3.  Failure to accomplish the requirements specified in this document or the RAP tasking message requires recertification IAW paragraph **4.8.3**

4.3.5.  **Special Unit Requirements.** This paragraph applies to Designated Training (TF-coded) and Designated Test (CB-coded) Aircraft Units.

4.3.5.1.  API-1/6 pilots assigned or attached to TF/CB-coded units will fly at the BMC rate and accomplish the applicable BMC requirements in the RTM.  Formal training syllabus-directed missions and approved test plan missions apply to the BMC rate requirement **(T-2).**

4.3.5.2.  IPs will be current and qualified in all events they instruct except where specifically waived in Note 4 of **Table 4.1**  Failure to complete a RAP requirement will not affect IP status, but will require additional training as determined by the SQ/CC prior to instructing that event.  For CB-coded units, SQ/CCs may designate IPs as initial cadre to instruct new events under an approved test plan **(T-3).**

4.3.5.3.  **Ground Training.** SQ/CCs will direct additional ground training necessary to accomplish special unit requirements, such as IP phase briefings and test preparation **(T-3).**

4.3.5.4.  **Flying Training.** SQ/CCs will direct additional sorties if syllabus or test missions provide insufficient pilot proficiency training **(T-3).**

4.3.5.5.  For United States Air Force Air Warfare Center (USAFAWC) and United States Air Force Weapons Test Center (USAFWTC) pilots, night flying and AAR events are only required to meet syllabus or program requirements.

4.3.5.6.  Pilots assigned/attached to USAFWC, 422 TES, 85 TES, and 86 FWS will maintain appropriate weapons delivery currencies, and at the unit CC's discretion, may fly in the RCP of aircraft participating in A/G WSEP.  83 FWS pilots will maintain ACBT currency and, at the 83 FW/CC's discretion, may fly in the RCP of aircraft participating in A/A WSEP **(T-3).**

**4.4.  Special Categories:**

4.4.1.  Flight Surgeon (FS)/Ground Liaison Officer (GLO):

4.4.1.1.  FSs/GLOs may fly any tactical missions for which they are fully briefed and prepared.  They will fly with an experienced pilot or flight lead.  Initial checkouts will be IAW paragraph **3.6** **(T-3).**

4.4.1.2.  FS flying rates and requirements will be IAW AFI 11-202V1 **(T-2).**

4.4.1.3.  All SQ flight surgeons assigned to fighter/attack/FAC(A)/FTU are required to complete centrifuge training IAW AFI 11-404 (Centrifuge Training for High-G Aircrew). During centrifuge training, they will receive instruction on AVTR review **(T-2).**

4.4.2.  MAJCOM and NAF API-8 Pilots and MAJCOM/IGS Flying Inspectors.  (ANG: Responsibilities for API -8 staff flyers are contained in AFI 11-401 as supplemented by the ANG).

4.4.2.1.  Mission Directed Training (MDT) for HHQ (ex: NAF, MAJCOM, Air Staff) personnel (other than that conducted in support of a formal inspection) requires coordination with the supporting unit.  MAJCOM division chiefs are the reviewing authority for assigned personnel.  They will: **(T-2).**

4.4.2.1.1.  Coordinate with the supporting agency to ensure appropriate ARMS data is maintained and provided IAW AFI 11-401.

4.4.2.1.2.  Review assigned pilot accomplishments and currencies prior to authorizing pilots to participate in MDT.

4.4.2.2.  HHQ flying personnel maintaining BMC status are exempt from non-grounding academic ground training, NAAR, CST, ACDE training, and special training programs within authorized mission areas.  Specific currencies will be provided to the host squadron and HHQ supervisors will determine pilot qualifications to participate in squadron scenarios for MDT. **(T-2).**

4.4.2.3.  HHQ pilots will: **(T-2)**

4.4.2.3.1.  Review accomplishments and currencies for accuracy.

4.4.2.3.2.  Submit qualification/authorization documentation to the supporting SQ/CC, DO or authorized representative prior to flying with that squadron.

4.4.2.4.  IPs may perform instructor duties with the concurrence of the OG/CC, if qualified and current for the applicable missions/events.

4.4.3.  RegAF Pilots Flying with ANG or AFRC Units: **(T-2).**

4.4.3.1.  Wing/group air advisor rated personnel on duty with operational training units can maintain CMR/instructor status, as appropriate, and may be qualified as an FE.

4.4.3.2.  MAJCOM pilots may fly with other MAJCOM units IAW AFI 11-401.

4.4.3.3.  Pilots on exchange programs from RegAF units are authorized mission oriented sorties IAW the specific guidance that establishes the exchange.  Squadron commanders may authorize their participation IAW their specific experience and qualification.

4.4.3.4. HHQ staff pilots may participate in tactical training events.  Each pilot will present documentation summarizing currencies, egress training, flight qualifications, etc., to the unit where flying is performed.

**4.5. Multiple Qualification/Currency:**

4.5.1. MAJCOM/A3 (ANG: NGB/A3) may authorize qualification in more than one MDS aircraft for pilots only when such action is directed by command mission requirements and is economically justifiable. This authority cannot be delegated below MAJCOM level. Unless required for unit mission accomplishment, commanders must not permit pilots qualified in primary mission aircraft to maintain qualification in support aircraft. Individuals assigned to positions covered by paragraph **4.5.2** have MAJCOM/A3 approval, and not need to submit specific requests.

4.5.1.1. Submit multiple qualification requests through command channels to MAJCOM/A3 (ANG: NGB/A3). All requests must contain full justification. Approval for a multiple qualification request must be provided to the appropriate host installation aviation management office **(T-2).**

4.5.1.2. Individually authorized multiple qualifications are valid as long as the individual is assigned to the specific position, and aircraft requested, or until rescinded by the approval authority.

4.5.2. Paragraph **4.5.1** does not apply to variants of the F-16.  These aircraft are considered the same MDS.  See paragraph **6.15** for block differences training.

4.5.3. Multiple qualification is not appropriate for senior wing supervisors of units with different types of aircraft.  Wing commanders will qualify in only one of their wing's aircraft **(T-2).** Either the WG/ CV or OG/CC should qualify in another of the wing's aircraft (not the same one selected by the WG/CC).

4.5.4. **Multiple Requirements.** Pilots will satisfy at least 50 percent of the sortie requirements of their primary aircraft in that aircraft.  If CMR, they will meet all RAP sortie/event requirements of the primary aircraft.  In addition, pilots will fly an equitable distribution of emergency patterns, instrument sorties, penetrations, non-precision approaches, and precision approaches in each MDS to fill their non-RAP requirements **(T-2).**

4.5.5. **Multiple Currencies**.  Pilots will fly at least once each 45 days in each aircraft.  They will comply with all other currency requirements for each aircraft **(T-2).**

4.5.6. Pilots must complete conversion training IAW an approved syllabus **(T-2).**

**4.6. Currencies/Recurrencies/Requalifications:**

4.6.1. **Currency. Table 4.1**, as supplemented by the most current RTM, defines currency requirements for all F-16 pilots.  If a pilot loses a particular currency, that sortie/event may not be performed except for the purpose of regaining currency as noted **(T-2).**

**Table 4.1.  F-16 Pilot Currencies.**

| EVENT | To update fly: | INEXP | EXP | Affects CMR | To regain currency: | NOTES |
|---|---|---|---|---|---|---|

| DEMANDING SORTIE | Any Sortie | 21 | 30 | NO | Non-demanding mission | 1, 10 |
|---|---|---|---|---|---|---|
| LANDING | Landing | 30 | 45 | NO | Landing, Ref 4.6.3 | 2, 10 |
| Rear Cockpit Landing | RCP Landing | N/A | 90 | NO | RCP Landing, Ref 4.6.3 | 2 |
| NIGHT LANDING | Day or night Landing | 21 | 30 | NO | Day landing, Ref 4.6.3 | |
| SFO | Event or Sim Event | 90 | 90 | NO | Event | 3, 14 |
| ACBT | ACBT | 60 | 90 | YES | ACBT, Ref 4.6.4 | 3, 4 |
| RANGE | Event | 120 | 180 | NO | Event | 3, 6 |
| LOWAT | Low A/A or Low A/G Event | 60 | 90 | NO | LOW A/A or Low A/G Event | 3, 4, 7 |
| AAR | Day or Night AAR | 180 | 180 | YES | Event | 3 |
| FORMATION APPCH | Event | 120 | 180 | NO | Event | 3, 4, 5 |
| PRECISION APPROACH | Event or Sim Event | 30 | 45 | NO | Event | 8, 15 |
| Element A/A Maneuvers | Event | 60 | 90 | NO | Event | 3, 4, 9 |
| INSTRUCTOR | Event or Sim Event | N/A | 90 | NO | Event, Ref 4.6.5 | 10, 15 |
| NVG | Event or Sim Event | 120 | 180 | NO | NVG Re-currency mission IAW para 4.6.6. | 10, 11, 15 |
| NVG LOWAT (N/A ANG) | Event | 60 | 120 | NO | NVG LOW ALT Fam | 3, 12 |
| FCF Profile | Event or FCF Sim | N/A | 90 | NO | Event or FCF Sim | 13, 15 |
| LOW ALT LGB | Event | 45 | 60 | NO | Day Event | 3, 17 |
| TFR (AETC only) | Night Event | 45 | 60 | NO | Night Event | 16 |
| SELF-DESIGNATED LGB LOFT | Night Event | 30 | 45 | NO | Night Event | 16 |

**NOTES:**

1.  See Attachment 2 for demanding/non-demanding sortie definitions.  In addition, BAQ pilots will fly in a super

vised status (with a FL-qualified SQ supervisor or IP) any time a non-demanding sortie is required.

2.  Recurrency supervision level is IP in aircraft or chase, qualified and current in event.  To regain RCP landing currency, FCP must be occupied by a BMC/CMR pilot with landing currency.

3.  Supervision will be FL-qualified SQ supervisor or instructor, qualified and current in the event/capability.

4.  For formal course IP's (WIC and FTU), CT and exercise participation require above currencies; formal syllabus training missions require 180 days currency.

5.  Flight leaders may update currency from either lead or wing position.  Recurrency will be accomplished from wing position.

6.  Updated by an actual weapons release on a class A/B/C range.

7.  Currency is required in the pilot's low altitude category for operations below 1000 feet (Table 6.1).  Loss of currency requires regression to the next higher altitude block.  Operations in a lower block will update the higher block categories.  Re-currency requires satisfactory performance in the following events: vertical awareness training, hard turns, tactical formation, and offensive/defensive maneuvering.

8.  If non-current in precision approaches, increase the pilot weather minimum by one category.  To regain currency, fly a precision approach.  Any simulator may be used to update currency (but not to regain currency) provided simulator training is accomplished with WX at/below pilot minimums.

9.  Element Air-to-Air currency.  Currency is updated by accomplishing an A-A event with emphasis on blue element employment contracts and de-confliction.  Does not affect CMR.  If non-current, must accomplish a day event.  Opposed Air-to-Ground sorties that fit the definition in A2.1.24 may update this currency.

10.  For IPs, accomplishing or instructing the event from either cockpit will update currency.  WIC student sorties count as instructor sorties.

11.  Must be current in NVG Refresher Academics.  Supervision will be an NVG current, qualified pilot in the aircraft or current, FL-qualified SQ supervisor or IP in the element..

12.  Currency is required in NVG LOWAT to fly in the night low altitude environment (IAW AFI 11-214).  Loss of currency will require re-accomplishment of single ship low altitude familiarization (IP/Sq supervisor chased) IAW para 6.7.6.8.

13.  Supervision for flight or simulator will be a current and qualified FCF pilot.

14.  For units with an MTC, this currency may be updated in the simulator as part of a tactical/EP sim profile.

15.   For units with any type of simulator (UTD, MTT, NTC, MTC), this currency may be updated as part of a tactical/EP sim profile.

16.  See paragraph 4.6.8.

17. LOW ALT LGB currency applies to LANTIRN pilots conducting LGB attacks in a certified LOW ALT block while operations are conducted using the LANTIRN system.

4.6.2.  **Recurrency.**  Pilots require additional training if a currency requirement is not met.

4.6.2.1.  Pilots must accomplish overdue training requirements as specified by the SQ/CC before they are considered requalified to perform the task **(T-3).** Training annotated as affecting CMR status will require regression to N-CMR until the pilot accomplishes the training **(T-2).** Training identified as not affecting CMR status does not require regression from CMR; however, it may result in grounding until the training is completed.  The duration of grounding and status of sortie lookback will determine the effect on CMR status.

4.6.2.2. Unless otherwise specified, supervisory requirements pertaining to recurrency may be satisfied in the cockpit or flight position that offers the best control of the mission, as determined by the SQ/CC.

4.6.3. **Landing Recurrency.** Loss of landing currency requires the following action (timing starts from date of last landing): **(T-2).**

4.6.3.1. **31-90 Days (46-90 Days--Experienced).** Regain landing currency IAW **Table 4.1**.

4.6.3.2. **91-135 Days.** Same as paragraph **4.6.3.1**, plus instructor supervised SIM (tactics, normal and emergency procedures for CMR pilots; normal, instrument, and emergency procedures for BMC pilots).

4.6.3.3. **136-210 Days (136-225 Days for experienced).** Same as paragraph **4.6.3.2**, plus (CMR/BMC) closed and open book qualification examinations, EPE, and CAPs written examination.

4.6.3.4. **211 Days (226 Days for experienced) to 12 Months Unqualified.** Requalification training IAW AFI 11-202, Volume 1. SQ/CCs may conduct the requalification locally.

4.6.3.5. **Greater than 12 Months Unqualified.** Accomplish applicable formal TX course.

4.6.4. **ACBT Recurrency.** Pilots losing currency in ACBT require action IAW the following paragraphs: **(T-2).**

4.6.4.1. **61-90 Days (91-120 Experienced).** BFM (offensive and/or defensive).

4.6.4.2. **91-180 Days (121-180 Experienced).** BFM (offensive and/or defensive). Prior to commencing first BFM set, pilot requiring recurrency will accomplish AHC (One Vertical Recovery and one event from the HARTS series IAW AFTTP 3-3.F-16).

4.6.4.3. **Over 180 Days.** Accomplish a SQ/CC tailored program IAW paragraph **3.4.5**

4.6.5. **Loss of/Requalification to IP Status.** IPs will be decertified for: **(T-2).**

4.6.5.1. Failure of a flight evaluation. To regain IP status, the IP must successfully complete a flight check IAW AFI11-202V2.

4.6.5.2. Failure of an INST/QUAL open book test. To regain IP status, the IP must successfully reaccomplish the written exam.

4.6.5.3. Expiration of instructor currency. 91-180 days requires an instructor recurrency flight with an IP. Over 180 days requires a MSN evaluation IAW AFI11-2F-16V2. IP rear cockpit landing currency is 90 days. WIC student sorties count as instructor sorties for currency. Waiver authority is IAW AFI11-202V2 and AFI11-2F-16V2.

4.6.5.4. Loss of CMR/BMC status due to loss of currency in an event/sortie and the SQ/CC deems decertification is required. If the SQ/CC does not elect this option or if the instructor becomes noncurrent in events/sorties which do not require removal from CMR/BMC status, instructor status may be retained, but the IP will not instruct in that event/sortie until the required currency is regained.

4.6.6. **NVG Re-currency Mission.** Pilots losing NVG currency must accomplish the following events prior to unrestricted night operations: **(T-2).**

4.6.6.1.  2-ship basic formation work / light drills and unit specific mission elements.

4.6.6.2.  Tactical turns and maneuvers.

4.6.6.3.  Minimum of one of the following night profiles/sorties:

4.6.6.3.1.  Intercept NVG-TI profile not to exceed 2v2, above 5,000 feet AGL or MSA whichever is higher, or

4.6.6.3.2.  2-ship BSA (OG/CC waiverable up to 4-ship) above 4,500 feet AGL or MSA whichever is higher, or

4.6.6.3.3.  2-ship Unopposed SAT/SEAD (OG/CC waiverable up to 4-ship) above 4,500 feet AGL or MSA whichever is higher.

4.6.6.3.4.  CAS above 4,500 feet AGL or MSA whichever is higher.

4.6.7.  ACC/AOS Currency Requirements.  Units will comply with AFI 11-207 for additional currencies required for the flight delivery of aircraft coordinated through ACC/AOS **(T-1).**

4.6.8.  **TFR Recurrency (AETC only).**  Loss of TFR currency requires the following actions (timing starts from date of last event): CB-coded units may use single seat aircraft with a current/qualified IP or SQ CC-designated supervisor in a chase aircraft to update TFR currency requirements **(T-2).**

4.6.8.1.  **46-90 Days (61-90 Experienced).** Regression to Medium Altitude until recurrent.  Accomplish a night dual-supervised TFR event. Supervision required is an IP or SQ/CC-designated supervisor current and qualified in the event.

4.6.8.2.  **91-210 Days.** Accomplish a LANTIRN SIM and a night dual-supervised TFR event.

4.6.8.3.  **211 Days-1 Year.**  Re-accomplish unit Low Altitude LANTIRN top-off training IAW locally tailored Chap 6 upgrade program.

4.6.8.4.  **Over 1 Year.**  Accomplish LANTIRN requalification training.

**4.7.  Regression:**

4.7.1.  **CMR/BMC Regression for Failure to Meet Lookback.** Only RAP training and Contingency Operations sorties may be used for lookback.  If a pilot does not meet monthly lookback requirements throughout the training cycle, SQ/CCs can either:  Regress the pilot to N-CMR/N-BMC, as applicable; remove the pilot from a CMR/BMC manning position; or initiate action to remove the pilot from active flying status **(T-3).**

4.7.1.1.  Failure to meet 1-month RAP/Contingency Operations sortie lookback requires a review of the pilot's 3-month sortie history.  If the 3-month lookback has been met, pilots may, at SQ/CC discretion, remain CMR/BMC.  Failure to meet the 3-month lookback will result in regression to N-CMR/N-BMC status as appropriate, or the pilot may be placed in probation status for one month at the squadron commander's discretion.  If probation is chosen, the only way to remove a pilot from probation and preserve the current status is to reestablish a 1-month lookback at the end of the probation period.

Probation will not be used to disguise extended shortfalls in sorties that would result in underperforming the training cycle totals.  Probation should be used sparingly.

4.7.1.2. CMR/BMC pilots regressed to N-CMR/N-BMC for lookback, must complete a SQ/CC approved re-certification program to include supervision requirements, sortie types, and mission elements specific to the N-CMR/N-BMC aircrew to return to CMR/BMC status.  Upon completion of the re-certification program, the CMR/BMC pilots must also meet 1-month lookback requirements prior to reclaiming CMR/BMC status.  The sorties and events accomplished during the re-certification program may be credited towards their total/type sorties and events **(T-2).**

4.7.1.3. Lookback computations begin following completion of MQT. The pilot must maintain 1-month lookback until 3-month lookback is established. SQ/CCs may apply probation rules as described in paragraph **4.7.1.1** if a new CMR/BMC pilot fails to meet 1-month lookback while establishing 3-month lookback. In addition, 1-month lookback will start the first full month of CMR/BMC status. **(T-2).**

4.7.2. **Regression for Weapons Qualification**.  Failure to maintain RAP tasked weapons qualification at the end of the training cycle may require regression to N-CMR/N-BMC. Refer to section **5.3.3** for requalification.

4.7.3. **Regression for Evaluation.** Pilots who fail an aircraft qualification, mission, or instrument evaluation will be handled IAW AFI 11-202V2.  Pilots will regress to N-CMR or N-BMC as applicable.   These pilots will remain N-CMR/N-BMC until successfully completing required corrective action, a reevaluation, and are recertified by the SQ/CC **(T-2).**

**4.8. End of Cycle Requirements.** Pilots who fail to complete mission and/or event requirements of this instruction at the end of the training cycle may require additional training depending on the type and magnitude of the deficiency.  Refer to paragraph **4.9** to see if some of these requirements can be prorated.  In all cases, report training shortfalls IAW paragraph **1.2.5.12 (T-2).**

4.8.1. Pilots failing to meet total training cycle RAP mission requirements may continue CT at CMR/BMC as determined by lookback.  The SQ/CC will determine if additional training is required **(T-3).**

4.8.2. Pilots failing to meet RAP mission type requirements will result in one of the following: **(T-3).**

4.8.2.1. Regress to N-CMR/N-BMC if SQ/CC determines the mission type deficiency is significant.  To regain CMR/BMC the pilot must complete all deficient sortie types. These sorties may count towards total requirements for the new training cycle **(T-3).**

4.8.2.2. Continue at CMR/BMC if total RAP sorties and lookback are maintained and the sortie type deficiencies are deemed insignificant by the SQ/CC **(T-3).**

4.8.3. Pilots failing to accomplish sorties required for Special Capabilities/Qualifications will lose their qualification **(T-2).**  The SQ/CC will determine requalification requirements **(T-3).**

**4.9. Proration of End-of-Cycle Requirements.** At the end of the training cycle, the SQ/CC may prorate all training requirements when DNIFs, emergency leaves, Consecutive Overseas Tour (COT) leaves, non-flying TDY/exercises combat/contingency deployments, (ANG: and or

mandatory training required by civilian employment), preclude training for a portion of the training period.  Use **Table 4.2** to determine proration.  Normal leave will not be considered as non-availability.  Extended bad weather, which precludes the unit from flying for more than 15 consecutive days may be considered as non-availability.  (ANG: End-of-cycle proration is permitted for documented attrition (e.g., HHQ or weather cancels, MNDs, ground or air aborts) in monthly increments when the total number of occurrences ranges from one half to one times the individual's normal monthly rate of flying). Commanders will not prorate for time deployed for contingency operations unless the individual(s) were assigned to non-flying positions **(T-2).** The following guidelines apply:

**Table 4.2.  Proration Allowance.**

| CUMULATIVE DAYS OF NON-FLYING | MONTHS OF PRORATION ALLOWED |
|---|---|
| 0 – 15 | 0 |
| 16 – 45 | 1 |
| 46 – 75 | 2 |
| 76 – 105 | 3 |
| 106 – 135 | 4 |
| 136 – 165 | 5 |
| 166 – 195 | 6 |
| 196 – 225 | 7 |
| 226 – 255 | 8 |
| 256 – 285 | 9 |
| 286 – 315 | 10 |
| 316 – 345 | 11 |
| 346 – 375 | 12 |

4.9.1. Proration will only be used to adjust for genuine circumstances of training non-availability and not to mask maintenance, FHP execution, training or planning deficiencies **(T-2).**

4.9.2. Proration is based on cumulative days of non-availability for flying in the training cycle.  Use **Table 4.2** to determine the number of months to be prorated based on the cumulative number of calendar days the pilot was not available for flying during the training cycle. **(T-2).**

4.9.3.  If IQT or MQT is reaccomplished a pilot's training cycle will start over at a prorated share following completion of IQT/MQT training.

4.9.4. **Example:** Capt Jones was granted 17 days of emergency leave in January and attended SOS in residence from March through April for 56 consecutive calendar days.  His

SQ/CC authorized a total of two months proration from his training cycle (two months for the 73 cumulative days of non-availability for flying). (ANG: Maj Smith is an experienced CMR pilot with a normal monthly requirement of 6 sorties. He had eight attrition occurences throughout the training cycle, therefore his SQ/CC can prorate one month of Maj Smith's training requirements).

4.9.5. Prorated numbers resulting in fractions of less than 0.5 will be rounded to the next lower whole number; however, no requirement may be prorated below one **(T-2).**

4.9.6. Newly assigned/converted pilots and pilots achieving CMR/BMC after the 15th of the month are considered to be in CT on the first day of the following month for proration purposes. A prorated share of RAP sorties must be completed in CT **(T-2).**

4.9.7. Night and AAR requirements accomplished during MQT may be credited toward prorated CT requirements if accomplished during the cycle in which the pilot was declared CMR/BMC unless specified otherwise by MAJCOM.

4.9.8. A pilot's last month on station prior to departing PCS may be prorated provided 1 month's proration is not exceeded. Individuals departing PCS may be considered CMR for reporting purposes until loss of CMR currency, port call date, or sign in at new duty station, whichever occurs first.

4.9.9. CMR pilots who attend USAF Weapons School in TDY-and-return status may be reported throughout the TDY as CMR. Upon return, those pilots will accomplish a prorated share of sortie/ event requirements (see **Table 4.2**) **(T-2).**

4.9.10. **Contingency Operations.** Contingency operations can have a positive or negative impact on a unit's CT program, as emphasis is on supporting the actual contingency. A potential lack of training opportunities while supporting contingency operations can place a burden on the unit, forcing it to accomplish the majority of its CT program in a reduced period of time or with reduced assets. The following proration procedures are intended to provide flexibility in accomplishing the unit's CT program **(T-2).**

4.9.10.1. Missions flown during contingency operations do not count toward RAP requirements, but may be used for lookback purposes. RAP events accomplished during contingency operations may be used to update currencies (i.e., landing currency) but they do not count toward training cycle requirements (Exception: AAR can be used to update currencies and count toward training cycle requirements). (ANG/AFRC: individuals deployed for more than a seven-day period may prorate a one-month portion of RAP missions and events.)

4.9.10.2. As the training quality of missions flown at contingency locations may vary considerably, OG/CCs are authorized to allow sorties that provided valid training to be logged as RAP sorties **(T-3).** Events accomplished on these sorties count toward RAP event requirements, and these sorties/events may not be prorated **(T-2).**

**4.10. Regaining CMR/BMC Status:**

4.10.1. If CMR/BMC status is lost due to failure to meet the end of cycle weapons qualifications and/or event requirements, requalification is IAW paragraph **5.3.3 (T-2).**

4.10.2. If CMR/BMC status is lost due to failure to meet lookback IAW paragraph **4.7.1**, the following applies (timing starts from the date the pilot came off CMR/BMC status): **(T-2).**

4.10.2.1. **Up to 90 Days.** The pilot must complete SQ/CC directed re-certification program in accordance with paragraph **4.7.1.2**  In addition, all RAP event currencies must be regained.  The SQ/CC will approve any other additional training prior to re-certification to CMR.

4.10.2.2. **91-180 Days.** Same as above, plus Stan/Eval generated open and closed book written examinations.

4.10.2.3. **181 Days and Beyond:** Reaccomplish MQT to include a Form 8 Mission Evaluation.

**4.11.  Example of the Lookback, Regression, Proration, and Requalification Process:**

4.11.1. Capt Smith is an experienced CMR pilot in ACC with a 1 and 3 month lookback requirement of 9 and 27 RAP missions respectively.  On 3 Feb, he flew an ACBT sortie prior to departing for a non-flying TDY for two months.  He reported back for flight duty on 6 Apr.  What is his status throughout his TDY and on his return?

4.11.1.1. The SQ/CC wanted to list Capt Smith as a countable CMR pilot for reporting purposes throughout the TDY.  Therefore, on 1 Mar, his Flt/CC performed the mandatory 1-month lookback (Feb) on Capt Smith.  He only flew one RAP sortie, failing the 1-month lookback.  The Flt/CC then performed a 3-month lookback (Dec, Jan, Feb).  This showed that he flew only 24 sorties for this period.  Had he flown three more sorties, his SQ/CC could continue Capt Smith at CMR.  With 21 sorties, Capt Smith did not meet the 3-month lookback for a CMR pilot.  The SQ/CC could regress Capt Smith to N-CMR, but instead elected to put him on probation, still carrying him as CMR.

4.11.1.2. The SQ/CC decided to carry Capt Smith on probation for one month.  On 1 Apr, Capt Smith's 1 month lookback (Mar) was 0 sorties.  The SQ/CC must now regress Capt Smith to N-CMR.  When Capt Smith returns, the SQ/CC will have to place him in a re-certification program.  Upon completing this program, Capt Smith will need to re-establish his 1-month lookback by 1 May.  Failing to do so would force him to be reported N-CMR one more month until the next lookback process on 1 June.

4.11.1.3. If he had returned on 22 Mar, and had last landed the jet 48 days ago, he could fly a non-demanding sortie to regain demanding sortie and landing currency.  For CMR purposes, Capt Smith would need to complete 9 RAP missions to recapture his 1-month lookback and get off probation.  Although Capt Smith was still CMR in Mar, the SQ/CC flew him with an IP on his first few sorties to regain his landing, AAR, LOWAT, and Formation T/O and Landing currencies.

4.11.1.4. At the end of the training cycle on 30 Jun, the SQ/CC prorated 2 months off of Capt Smith's total requirements.  In spite of this proration, Capt Smith was deficient in one mission category.  The SQ/CC could regress Capt Smith to N-CMR if deemed significant.  After accomplishing the tailored recertification program (in this case, the deficient sorties), the SQ/CC would recertify Capt Smith to CMR.  This training counts for the new training cycle.

**Figure 4.1. Regression Flow Chart.**
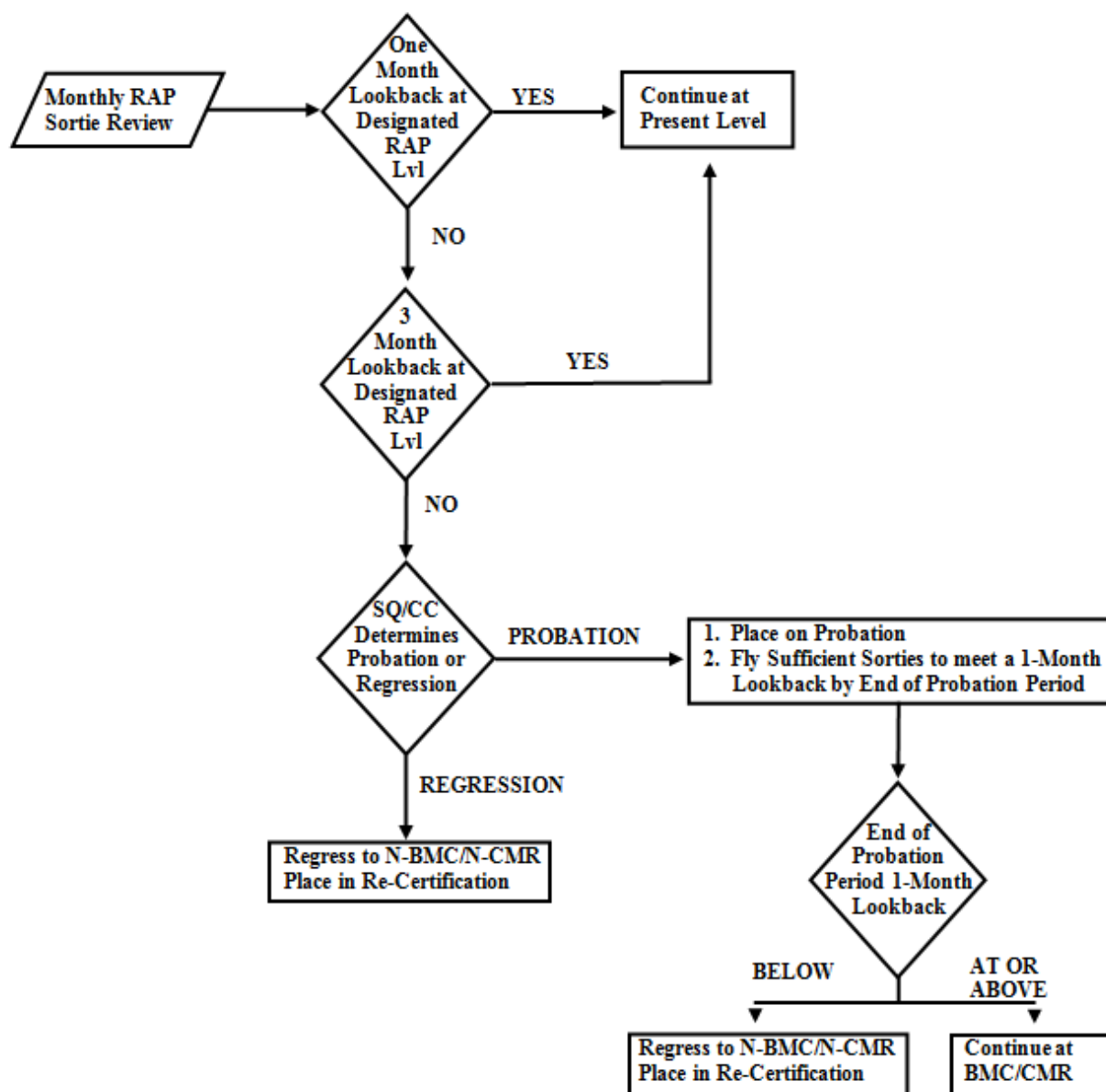


**4.12. Instrument Training.**

4.12.1.  OGs will develop an instrument training program IAW AFM 11-210 **(T-1).**

4.12.2.  Units which seldom encounter bad weather and/or night recoveries will exercise pilots and approach facilities by periodically simulating "weather day" recovery operations, as determined by the SQ/CC. **(T-3).**

4.12.3.  Pilots transferring from another MAJCOM require the theater-specific portions of IRC before flying without a theater-experienced pilot in the formation.  MQT academics and the MQT LAO mission may satisfy this requirement.

4.12.4. RAP events may be accomplished on an instrument mission provided accomplishment does not interfere with the primary goal of instrument training. The transition from instruments to visual references will be practiced on all instrument approaches. **(T-3).** An instrument sortie is a basic skills requirement and may be credited toward monthly RAP lookback only IAW the RTM.

**4.13. G-Awareness Continuation Training.** Units will develop a CT program that provides feedback to pilots and imprints a proper L-1 AGSM so that it becomes an integral part of pulling Gs **(T-1).**

4.13.1. The basis of this program is to give each FL, SQ supervisor, flight surgeon and, if available, aerospace physiologist the skills needed to evaluate a flight member's AVTR to ensure a proper AGSM is being performed. This program also makes assessment of the AGSM a normal debrief item after every flight. The assessment will be done as a normal part of AVTR assessment while reviewing other tactical portions of the mission. **(T-3).**

4.13.2. Use the following minimum guidance to implement the unit's program: **(T-1).**

4.13.2.1. AGSM technique and assessment will be incorporated into the squadron CT program. Emphasis will be placed on briefing, debriefing, and assessing the L-1 AGSM using the AVTR in the debrief on a daily basis. FLs, IPs, SQ supervisors, and flight surgeons will become adept at assessing and teaching the correct AGSM. Academics will include a discussion of the limitations imposed on aircraft performance as a result of an ineffective AGSM. **(T-2).**

4.13.2.2. The G-awareness exercise will be flown IAW the guidance in AFI 11-2F-16V3.

4.13.2.3. FLs will assess the AGSM effectiveness of flight members during mission debriefings. This assessment should not be limited to the G-awareness exercise. Evaluate the AGSM after the pilot has had the time to fatigue to get an accurate assessment of a pilot's AGSM during a tactically and G-demanding portion of flight. AGSM will also be evaluated under relatively low intensity G such as A/S sorties. **(T-2).**

4.13.2.4. An A/A mission tape for each pilot will be reviewed each training cycle by the squadron flight surgeon, aerospace physiologist, or a squadron supervisor. The reviews will be documented.

4.13.3. FLs or SQ supervisors will identify pilots having poor AGSM technique or low G-tolerance to the Flt/CC or appropriate operations supervisor. The SQ/DO or appropriate operations supervisor will determine what action is required to improve the pilot's G-tolerance. The SQ/CC will determine if refresher training is required IAW AFI 11-404.

**4.14. Hi-AoA Training.** AFMC's 416FLTS has developed Hi-AoA academics and flight instruction. The training is available at Edwards AFB or 416FLTS IPs can travel if units have access to appropriate airspace to conduct deep stall/recovery training as defined in AFMC guidance. The training purpose is to teach the pilot how to recognize, recover from, and ultimately avoid deep stalls. Pilots will receive this instruction at least once, preferably early, in their career. **(T-2).**

**Chapter 5**

**WEAPONS EMPLOYMENT QUALIFICATION**

**5.1. General.** This chapter outlines requirements for attaining initial qualification and maintaining CT qualification in the employment of air-to-surface and air-to-air weapons. Refer to "Glossary of Missions/Sorties/Events" at **Attachment 2** for further guidance on weapons qualifications.

**5.2. Initial qualification (QUAL):** Pilots must attain initial qualification in any weapon or weapon category listed as QUAL in the RAP Tasking memo **(T-2).** Initial qualification can be attained in IQT or MQT, and may be credited toward CT qualification requirements.

 5.2.1. Initial qualification and requalification in a weapon or weapon category is satisfied when the pilot has achieved a minimum of 3 hits out of 6 consecutive employment attempts. Initial qualification will carry over for consecutive F-16 assignments.

**5.3. CT qualification (QUAL):** Pilots must maintain qualification in any weapon or weapon category listed as QUAL in the RAP Tasking memo **(T-2).** These criteria establish the minimum standards for a pilot to maintain qualification and do not necessarily determine evaluation criteria established by other instructions or agencies (e.g., inspection/evaluation teams).

 5.3.1. CT weapons employment will be from tactical deliveries or intercepts simulating realistic employment of UCML munitions. **(T-2).** To maintain a combat perspective during training, CT air-to-surface weapons employment qualification requirements will be accomplished using full scale live/inert munitions and Standard Conventional Loads (SCLs) to the maximum extent possible **(T-2).** To achieve this, units will strive to schedule full scale live/inert munitions such that every CMR pilot and the maximum number of aircraft have the opportunity to expend.

 5.3.2. QUAL for air-to-surface weapons requires a hit rate of 50 percent when compared to total employment attempts. QUAL for air-to-air weapons requires a 75% hit rate (valid at pickle/trigger squeeze) when compared to total employment attempts. Hit criteria is IAW AFTTP 3-1.F-16 and/or this Volume, as applicable. The RAP Tasking memo further defines QUAL requirements based on the training cycle.

  5.3.2.1. Video assessment. 100% of guided air-to-surface and air-to-air weapons employment qualification requirements can be video assessed. Unguided Munitions and Strafe require actual weapons employment. Squadron Commanders can waive the requirement for actual weapons employment in locations where limited range availability prohibits sufficient employment opportunities, provided and equal number of dry, video-assessed attempts are accomplished **(T-3).**

  5.3.2.2. At the end of the  training cycle, each pilot's weapons employment statistics (hit/miss percentages) will be reviewed to assess qualifications **(T-2).** Weapons employment qualifications are valid through the subsequent training cycle.

 5.3.3. **Failure to Qualify:** Failure to qualify in one weapon or weapon category does not invalidate qualification in others. SQ/CCs may declare a pilot unqualified in a weapon or weapon category at any time during a training cycle without affecting other weapon employment qualifications. If qualification is required at CMR/BMC, failure to qualify will

result in regression to N-CMR/N-BMC until requalification is accomplished IAW paragraph **5.2.1** **(T-2).**

**5.4. Familiarization (FAM):** Familiarization for weapons does not require a hit rate when compared to total employment attempts.  The RAP Tasking memo further defines FAM requirements based on the training cycle.

**5.5. Weapons Employment Parameters.** The event requirements and parameters listed below form the basic framework for pilot weapons employment training.  All weapons employment will conform to the limits established for each specific event **(T-2).** Pattern descriptions, procedures, training rules, and foul criteria are contained in AFI 11-2F-16V3 and AFI 11-214. Events performed at night may require higher minimum recovery altitudes based on AFI 11-214.

5.5.1. **Strafe Events. Tactical Strafe (TAC STRF)** is a combined event.   Any combination of LAS and/or HAS hits satisfies this training requirement.  Each pass is a standalone event for weapons employment qualification with a maximum of 3 passes per sortie.  Hit criteria (regardless of aircraft rounds limiter setting): acoustically scored or independently observed impacts on a point target, or bullet dispersion within 36 feet of any target.  For VTR assessment: a stabilized pipper on target during witness cue.

5.5.1.1. **Low Angle Strafe (LAS).** Planned dive angle 15 degrees or less.  Minimum recovery altitude is 75 feet AGL.  Foul line is 2,000 feet.

5.5.1.2. **High Angle Strafe (HAS).** Planned dive angle greater than 15 degrees.

5.5.1.2.1. Day High Angle Strafe minimum recovery altitudes are 1,000 feet AGL for planned dive angles 30 degrees or less and 1,500 feet AGL for planned dive angles above 30 degrees.

5.5.1.2.2. Night High Angle Strafe HIGH Illum minimum recovery altitudes are 1,000 feet AGL for planned dive angles 30 degrees or less and 1,500 feet AGL for planned dive angles above 30 degrees if qualified to execute below MSA at night.

5.5.1.2.3. Night High Angle Strafe LOW Illum minimum recovery altitudes are 1,000 feet AGL or MSA whichever is higher for planned dive angles 30 degrees or less and 1,500 feet AGL or MSA whichever is higher for planned dive angles above 30 degrees.

5.5.2. **Guided Munitions Events:**

5.5.2.1. **AGM-65 Maverick.** A delivery initiated from a level, diving, or pop-up maneuver to achieve line-of-sight to the target(s).  Acquisition, missile lock-on and launch, or 2 seconds stable lock-on in "No launch" conditions, followed by a tactical escape maneuver is required.  Hit criteria:  Either actual target impact or valid, recorded TGM simulated weapon release within launch parameters with stabilized target tracking. May be accomplished in a simulator (AFRC: N/A).

5.5.2.2. **Laser Guided Bomb (LGB).** An event in which a combat/training laser is employed to self-lase simulated/actual ordnance during an LGB delivery.  Minimum recovery is safe escape/fuse arm/guide time required for the ordnance being simulated/delivered.  Hit criteria: IAW AFTTP 3-1.Shot Kill.

5.5.2.3.  **Inertially Aided Munition (IAM).**  An event in which an aircraft system is used to determine release parameters for JDAM, JASSM, JSOW or WCMD weapons and MALD.  Simulated or actual delivery of ordnance is required.  Minimum recovery is safe escape for the ordnance being simulated/delivered.  Hit criteria: IAW AFTTP 3-1.Shot Kill.

5.5.2.4.  **GBU-54 Laser JDAM.**  For weapons qualifications purposes, laser JDAM will be counted towards either an LGB or IAM event, depending on the mode of terminal guidance.   If the bomb receives terminal laser guidance, it is an LGB event.  Bomb-on-coordinate (BOC) deliveries (without terminal laser guidance) are IAM events

5.5.2.5.  **AGM-88 High Speed Antiradiation Missile (HARM).**  Maneuver as required to achieve weapon employment.  Acquisition and launch may be performed from a level, climbing, or diving maneuver to achieve firing parameters.  A maximum of 4 HTS and 4 HAS shots may be credited toward qualification per mission.  4 HAS shots per training cycle must be with a CATM.  Hit criteria:  valid HARM launch (actual or simulated) IAW AFTTP 3-1.Shot Kill at pickle as determined by VTR review.

5.5.3.  **Unguided Munitions Events: Unguided Bomb (UGB)** is a combined event.  Any combination of hits from the following list of events satisfies this training requirement.

5.5.3.1.  **Visual Level Delivery (VLD).**  Is a delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) using any means of delivery with visual target acquisition/designation.  Minimum altitude is safe separation/escape/fuze arm for ordnance being delivered/simulated or 200 feet AGL or range/target area restrictions, whichever is higher.  Hit criteria:  130 feet (40m).

5.5.3.2.  **Systems Level Delivery (SLD).**  Is a delivery with less than five degrees of climb or dive at weapons release (non-maneuvering) using any means of delivery without visual target acquisition/designation.  Minimum altitude is safe separation/escape/fuze arm for ordnance being delivered/ simulated or the pilot's minimum low altitude qualification or range/target area restrictions, whichever is higher.  Hit criteria:  195 feet (60m).

5.5.3.3.  **Low Angle High Drag (LAHD).**  Planned dive angle is less than 30 degrees.  Minimum recovery altitude is safe escape for ordnance being simulated/delivered, or as required to recover above 100 feet AGL (300 feet on a Class B/C range or over water), or one-half the computed altitude loss from bomb release to recovery, whichever is higher.  Hit criteria:  75 feet (23m) for computed deliveries; 105 feet (32m) for manual; or within the target area or impacting the vertical panel in the skip target.

5.5.3.4.  **Low Angle Low Drag (LALD).**  Planned dive angle is less than 30 degrees.  Minimum recovery altitude is safe escape for ordnance being simulated/delivered or as required to recover above 1,000 feet AGL, whichever is higher.  Hit criteria:  100 feet (31m) for computed deliveries; 175 feet (53m) for manual.

5.5.3.5.  **Dive Bomb (DB).**  Planned dive angle is 30 degrees or greater.  Minimum recovery altitude is safe escape for ordnance being simulated/delivered, or as required to recover above 1,500 feet AGL, whichever is higher.  Hit criteria:  85 feet (26m) for computed deliveries; 145 feet (44m) for manual.

5.5.3.6. **High Altitude Dive Bomb (HADB).** Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 4,500 feet AGL.  Hit criteria:  125 feet (38m) for computed deliveries; 250 feet (76m) for manual.

5.5.3.7. **Medium Altitude Release Bomb (MARB).** Planned dive angle is 30 to 60 degrees.   Minimum recovery altitude is 7,000 feet AGL.  Hit criteria:  167 feet (58m) for computed deliveries.

5.5.3.8. **High Altitude Release Bomb (HARB).** Planned dive angle is 30 to 60 degrees. Minimum recovery altitude is 10,000 feet AGL.  Hit criteria:  255 feet (78m) for computed deliveries; 510 feet (136m) for manual.

5.5.3.9. **Low Altitude Toss (LAT).** A delivery executed from a pop-up or roll-in with less than a 10,000 feet AGL base/apex.  Aircraft will not enter lateral or vertical limits of the bomb frag pattern.  Any system may be used for target designation and weapon release.  Hit criteria is:  175 feet (53m).

5.5.3.10. **Loft Event.** A delivery which the aircraft (using appropriate aircraft systems for target acquisition, tracking and weapons release) approaches the target at low altitude, makes a definite pull-up at a given point, releases the bomb at a predetermined point during the pull-up while maximizing standoff range or weapons effects.  Minimum run-in/recovery altitude is the pilot's minimum low altitude qualification or range/target area restrictions, whichever is higher.  Hit criteria:  750 feet (229m).

5.5.3.11. **Special Weapons Event.** A delivery which utilizes all applicable nuclear switchology to release simulated or actual ordnance.  Minimum altitude is safe separation for ordnance being delivered/simulated, the pilot's minimum low altitude qualification or 100 feet AGL, whichever is higher.  Hit criteria:  Based on the delivery method used.

5.5.4. **Rocket Events.  Tactical Rockets (TAC RX)** is a combined event.  Any combination of HATR/LATR and/or LR hits satisfies this training requirement.  Hit criteria applies to controlled deliveries only.  Impromptu target marking should be validated by the timeliness and effectiveness of rocket impact for fighters to locate the target.

5.5.4.1. **Low Altitude Tactical Rockets (LATR).** A tactical delivery from a dive angle of 0 to 30 degrees; minimum recovery altitude 1,000 feet AGL.  Hit criteria:  1000 feet (300m).

5.5.4.2. **High Altitude Tactical Rockets (HATR).** A tactical delivery from a dive angle of 0 to 30 degrees; minimum recovery altitude 4,000 feet AGL.  Hit criteria:  500 feet (152m).

5.5.4.3. **Loft Rockets (LR).** A tactical delivery from level to 45 degrees of climb; minimum recovery altitude 300 feet AGL.  Hit criteria:  1650 feet (500m).

5.5.5. **Air-to-Air  Weapons  Events: AIM-9/AIM-120/A/A GUN.**   Hit criteria is IAW AFTTP 3-1.Shot Kill and/or this Volume as applicable.  Reference paragraphs **5.3** and **5.4**

**5.6. Full Scale Inert/Live Ordnance.** Full Scale Inert/Live ordnance training is essential to pilot combat capability.  Every attempt will be made to give pilots the opportunity to employ as many types of weapons on the unit's UCML as possible.  To provide this opportunity, pilots will attempt to expend the following ordnance:

5.6.1.  Three Unguided Munitions FSWD (IAW **Attachment 1** definition) per training cycle.

5.6.2.  Two actual IAM per training cycle.

5.6.3.  Two actual LGB per training cycle.

## Chapter 6

## SPECIALIZED TRAINING

**6.1. Specialized Training Programs.** This chapter outlines upgrade training programs for special capabilities and qualifications. These programs are intended to provide a basic starting point and may be modified by the SQ/CC based on the unit's requirements and/or the upgradee's previous experience, qualifications, and documented performance. Unless governed by a formal syllabus, ground and device training for these programs will consist of unit-developed academics and scenarios. Flight training will be conducted in accordance with a program approved by the SQ/CC **(T-3).**

**6.2. Flight Lead (FL) Upgrade.** This program establishes the minimum guidelines for those pilots identified by the SQ/CC to upgrade to flight lead. This program takes an F-16 pilot with demonstrated tactical proficiency as a wingman and teaches flight leadership and decision-making.

6.2.1. Initial entry may be as a two-ship/element FL until experience and proficiency warrant further progression, in which case, responsibilities for employment will not exceed two aircraft until certified as a four-ship FL. The SQ/CC will determine when a two-ship FL may train toward larger, more complex formations (three- or four-ship) **(T-3).**

6.2.2. The following minimum flying hours are required prior to entering FL upgrade training: **(T-3).**

6.2.2.1. 300 hours F-16, or

6.2.2.2. 200 hours F-16 with 400 hours IP/FP/MP in a 11Fxx, 11K3C, or 11K3D, 11K3F AFSC, or

6.2.2.3. 50 hours F-16, if previously qualified as a 11Fxx AFSC flight lead.

6.2.2.4. **(ANG & AFRC only)** For converting units, OG/CC's may select prior flight lead qualified pilots to upgrade to flight lead concurrently with the MQT top off program regardless of PAI hours.

6.2.3. **Ground Training.** Ground training will consist of locally developed instruction in the following areas. Add unit specific ground training items for unique ordnance, pods, or capabilities **(T-3).**

6.2.3.1. **FL Responsibilities.** FL/wingman relationship, airmanship, judgment and maturity will be addressed as they relate to flying and squadron related duties.

6.2.3.2. **Mission Preparation.** Mission objectives, wingman requirements and responsibilities, currencies, capabilities, delegation of mission planning duties, and briefing preparation.

6.2.3.3. **Conduct of Flight Briefings and Debriefings.** Objectives, use of briefing guides and audiovisual aids, flight member involvement, briefing techniques, debriefing/questioning techniques, tape review responsibilities and procedures.

6.2.3.4. **Conduct of Missions.** Control of flight, flight discipline, emergency procedures, training rules, and responsibilities to SQ/CC.

6.2.3.5. **AGSM Techniques.**  Briefing, debriefing, and AVTR assessment.

6.2.3.6. **IFEs and Emergency Diverts.** Divert decisions as an element, support of wingman during EPs, FL responsibility and authority, min fuel planning, and ATC assistance.

6.2.3.7. **Simulator Training.** To the maximum extent possible, high-fidelity simulator training will be incorporated into FL upgrade.  SIM missions will precede flight training whenever possible and reinforce common errors allowing upgrade pilots to repeatedly practice upgrade tasks.  Emergency procedures, lost wingman, and instrument training will be demonstrated in the sim, if available.

6.2.4. **Flight Training.** Flight training will be conducted in accordance with an upgrade program approved by the SQ/CC **(T-3).**  Missions may be flown in any order.  The program outlined below provides a basic starting point and may be modified by squadron commanders based on unit needs and/or upgradee's previous experience, qualifications, and documented performance.  All FLUG training will be under the supervision of an IP or flight lead-qualified squadron supervisor flying as the upgrading student's wingman **(T-2).** Dissimilar adversaries will be used to the maximum extent practical during FLUG training.  Units will add considerations/techniques for specialized capability (TGP, HTS, etc) to applicable areas **(T-3).**

6.2.4.1. **FLUG Event Requirements**.  Two formation takeoffs and landings, a day or night aerial refueling, trail departure, and a trail recovery will be accomplished as a flight lead during the program. **(T-3).**

6.2.4.2. **Night Employment**.  Employment with NVGs is integral to night missions in every upgrade program.  Include some non-NVG events in FLUG training.  All A-G missions may be completed in the day or night to include certification.

6.2.4.3. **FLUG-BFM--Mission Objectives.** Practice leading and controlling a 1v1 BFM mission including WVR and BVR setups.  Specific Mission Tasks:  Briefing, WVR setups, intercepts to BFM, weapons employment, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.2.4.4. **FLUG-ACM--Mission Objectives.** Practice leading and controlling a 2v1(+1) ACM mission including WVR and BVR setups.  Specific Mission Tasks: Briefing, perch setups, tactical intercepts to ACM, Tap n' CAP, weapons employment, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.2.4.5. **FLUG-ACT(2)--Mission Objectives.** Practice leading and controlling a 2vX (D)ACT mission.  Specific Mission Tasks:  Briefing, tactical formation, PID scenario, BVR setups for sweep and lane/point defense (concentrating on element/flight integrity), low/slow VID, ACMI procedures (if available), minimum fuel recovery, mission reconstruction and debriefing, tape review/ assessment (to include AGSM).

6.2.4.6. **FLUG-BSA/SAT(2)--Mission Objectives.** Practice leading and controlling a two-ship weapons delivery mission to a controlled range.  Specific Mission Tasks: Mission planning, briefing, LATN, LATF, surface-to-air threat reactions, first run attack, controlled range procedures, conventional (including strafe) and nuclear weapons

delivery patterns, hung ordnance recovery, landing, mission reconstruction and debriefing, tape review and assessment.

6.2.4.7.  **FLUG-CAS--Mission Objectives.**  Practice leading and controlling an element under JTAC/FAC(A) engagement authority.  Specific Mission Tasks: Briefing with GLO, briefing with JTAC/FAC(A), tactical departure, C2 check-in and authentication, TACS/AAGS coordination, FTR-JTAC briefs, 9-line, Type 1/2/3 control, surface-to-air threat reactions, employment with TGP desired, tactical egress, BDA, debrief with GLO, JTAC, and FAC(A).

6.2.4.8.  **FLUG-SAT(3of4)--Mission Objectives.**  Practice leading and controlling an element as number three of a four-ship tactics mission to a tactical range/working area in a medium/high threat scenario.  Specific Mission Tasks:  Trail departure, opposed ingress, medium/high threat target area tactics, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), tactical egress, comm jam procedures.

6.2.4.9.  **FLUG-NBSA(2)--Mission Objectives.**  Practice leading and controlling a two-ship night weapons delivery mission to a controlled range.  Specific Mission Tasks: Briefing, trail departure and joinup, surface-to-air threat reactions, med alt 2-ship attacks (TGP employment desired), NVG and non-NVG tactical formations, night range operations, weapons delivery patterns, debrief, tape review/assessment.

6.2.4.10.  **FLUG-CERT(2)--Mission Objectives.**  Assessment (by SQ/CC or designated representative) of flight lead abilities in a tactical mission scenario based on squadron tasking.  Specific Mission Tasks:  Briefing, mission accomplishment, flight management and control, mission reconstruction and debriefing, tape review/assessment.  This sortie is optional if UP is going directly to 4 Ship certification.

6.2.4.11.  **FLUG-ACT(4)--Mission Objectives.**  Practice leading and controlling a 4vX (D)ACT mission.  Specific Mission Tasks:  Briefing, tactical formation, PID/EID or VID scenario, BVR setups for sweep and lane/point defense (concentrating on element/flight integrity), ACMI procedures (if available), mission reconstruction and debriefing, tape review/ assessment (to include AGSM).

6.2.4.12.  **FLUG-BSA/SAT(4)--Mission Objectives.**  Practice leading and controlling a four-ship weapons delivery mission to a controlled range.  Specific Mission Tasks: Briefing, LATN, LATF, first run attack, surface-to-air threat reactions, controlled range procedures, conventional (including strafe) and nuclear weapons delivery patterns, hung ordnance recovery, landing, mission reconstruction and debriefing, tape review/ assessment.

6.2.4.13.  **FLUG-NSAT(4)--Mission Objectives.**  Practice leading and controlling a four-ship tactics mission in a high-threat scenario.  Specific Mission Tasks:  Briefing, threat reaction(s) to air and surface threats, tactical ingress, high-threat target area tactics, NVG and non-NVG tactical formations, specialized capability (TGP, HTS, etc) employment procedures/techniques, mission reconstruction and debriefing, tape review/assessment.

6.2.4.14.  **FLUG-CERT(4)--Mission Objectives.**  Assessment (by SQ/CC or designated representative) of flight lead abilities in a tactical mission scenario based on squadron

tasking.  Specific Mission Tasks:  Briefing, mission accomplishment, flight management and control, mission reconstruction and debriefing, tape review/assessment, critique.

6.2.5. **Flight Lead Certification.** A certification sortie is required by the SQ/CC or designated representative prior to operating as a 2/4 ship lead **(T-2).** (**Note:** If two- and four-ship upgrade training are combined, only one certification sortie is required).  Following a successful certification sortie, failure to complete scheduled training events (i.e., LOWAT, AAR, etc.) need not delay certification.  The SQ/CC will certify new flight lead's status, including any restrictions, in appropriate written format (letter, gradesheets, ARMS, etc).  **(T-3).**

6.2.6. **Strike Coordination and Reconnaissance (SCAR).** IAW joint doctrine, any qualified flight lead may also act as a SCAR.  If required by SQ/CC, accomplish additional theater specific ground or flying training within a locally directed syllabus.

**6.3. Instructor Pilot (IP) Upgrade.** This program establishes the minimum guidelines for those pilots identified to upgrade to IP.  SQ/CCs may waive selected missions based on previous experience **(T-3).** FTU instructors will complete a formal syllabus course as defined in the USAF Education and Training Course Announcements (ETCA) **(T-2).**

6.3.1.  Pilots selected for IP upgrade must be four-ship FLs with either: **(T-3).**

6.3.1.1.  500 hours F-16, or

6.3.1.2.  400 hours F-16 with 1,000 IP/MP/FP, or

6.3.1.3.  200 hours F-16 with 750 IP/MP/FP hours in an 11Fxx AFSC.

6.3.1.4. **(ARC)** Pilots may be designated by the OG/CC for IP upgrade regardless of time in the new PAI if they have at least 1,000 hours IP/MP/FP in a fighter AFSC and the IP upgrade will be conducted at FTU.

6.3.2. **Ground Training.** Upgrading pilots must satisfactorily complete the following unit-developed blocks of instruction prior to certification as IPs.  Units will add considerations/techniques for specialized training (TGP, HTS, etc) to applicable areas: **(T-2).**

6.3.2.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, IP/upgrade pilot relationship, training facilities, and publications.

6.3.2.2. **Techniques of Flight Instruction.** Training objectives and environment, maneuver demonstration, performance and review, recognition and analysis of common pilot errors.

6.3.2.3. **Instructor Responsibility.** Airmanship, judgment, maturity and flight discipline during briefing, in-flight, debrief, and additional squadron duties.

6.3.2.4. **Conduct of Flight Briefing.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debriefing techniques.

6.3.2.5. **Conduct of Phase Briefings.** Techniques for briefing, use of visual aids, review of applicable phase briefings.

6.3.2.6. **AGSM Techniques.** Briefing, debriefing, and AVTR assessment.

6.3.2.7. **Student Evaluations.** Grading systems and preparation/use of gradesheets.

6.3.2.8. **Simulator Training.** To the maximum extent possible, high-fidelity simulator training will be incorporated into IP upgrade.  SIM missions will precede flight training whenever possible and reinforce common errors allowing upgrade pilots to repeatedly practice upgrade tasks.  Emergency procedures, lost wingman, and instrument training will be demonstrated in the sim, if available. **(T-3).**

6.3.2.9. **Chase Techniques.** Techniques for flying evaluation chase to include recommended parameters to effectively determine aimpoint/glidepath, airspeed, altitude, and the effects of level off on final.  Discuss limitation of evaluation chase versus safety chase with regard to terrain/obstacle clearance.

6.3.3. **Flying Training.** Flight training will be conducted in accordance with an upgrade program approved by the OG/CC **(T-3).**  IPUG sorties may be flown in any order.  Transition and Helmet-Mounted Display (HMD) upgrade sorties do not need to be flown as dedicated sorties if all the training events listed are completed during normal flying training.  IPUG programs for pilots with previous fighter experience may be individually tailored based on experience, currency, and documented performance.  Unit programs will clearly specify which tasks the upgrading IP will demonstrate, which tasks the upgrading IP will practice evaluating the "student's" performance, and which tasks the UIP will do both.  AAR may be completed on any mission. **(T-3).**

6.3.3.1. **Night Training.** Employment with NVGs is integral to night missions in every upgrade program.  Include some non-NVG events in IPUG training.  All A-G missions (including certification) may be completed in the day or night.

6.3.3.2. **IPUG Events.** Accomplish the following events during the IPUG: chase overhead pattern, chase SFO, AAR (day or night), trail departure, trail recovery, formation takeoff/landing from each position.

6.3.3.3. **IPUG-BFM--Mission Objectives.** Introduce upgrading IP to instructing 1v1 BFM.  Specific Mission Tasks:  Briefing, WVR setups, intercepts to BFM, weapons employment, chased VFR patterns, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.4. **IPUG-ACM--Mission Objectives.** Introduce upgrading IP to instructing element maneuvering against an adversary.  Specific Mission Tasks:  Briefing, WVR setups, tactical intercepts to ACM, Tap n' CAP, weapons employment, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.5. **IPUG-TI--Mission Objectives.** Practice instructing and controlling a 2vX tactical intercept mission.  Specific Mission Tasks:  Briefing, tactical formation, 2vX tactical intercepts to engagements, VID scenario, combat separations, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.6. **IPUG-NTI—Mission Objectives.** Instruct 2vX air-to-air employment with NVGs.  Primary emphasis should be placed on how NVGs enhance night air-to-air element employment, rather than complex tactical employment scenarios.  Additional emphasis will be placed on single ship and element AAMD procedures with NVGs.  Focus the briefing on NVG tactical formation, employment and air-to-air threat reactions with NVGs. Specific Mission Tasks:  Tactical intercepts to include:  a) Sorting pass, b)

BVR launch and leave, c) Single-side offset, d) Element launch and react (Notch/Attack/Abort gameplan), e) Element AAMD. Employment with TGP is desired.

6.3.3.7. **IPUG-ACT--Mission Objectives.** Practice instructing and controlling a 4vX air combat mission. Specific Mission Tasks: Briefing, tactical formation, 4vX tactical intercepts to engagements, PID scenario, mission reconstruction and debriefing, tape review/assessment (to include AGSM).

6.3.3.8. **IPUG-BSA--Mission Objectives.** Introduce upgrading IP to instructing a basic surface attack mission to a controlled range. Specific Mission Tasks: Briefing, LATN, LATF, first run attack, surface-to-air threat reactions, conventional (including strafe) and nuclear delivery patterns, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), mission reconstruction and debriefing, tape review/assessment.

6.3.3.9. **IPUG-NBSA--Mission Objectives.** Introduce upgrading IP to instructing and controlling a night surface attack mission. Specific Mission Tasks: Briefing, NVG and non-NVG formation, surface-to-air threat reactions, med alt attacks (TGP employment desired), night range operations, night weapons delivery patterns, debrief, tape review/assessment.

6.3.3.10. **IPUG-NSAT--Mission Objectives.** Introduce upgrading IP to instructing and controlling a low- to medium-threat night tactics mission. Specific Mission Tasks: Briefing, NVG and non-NVG tactical formation, low/medium-threat tactics, threat reactions, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), mission reconstruction and debriefing.

6.3.3.11. **IPUG-SAT--Mission Objectives.** Introduce upgrading IP to instructing and controlling a tactics mission in a high-threat environment. Specific Mission Tasks: Briefing, tactical ingress, high-threat target area tactics, simulated/actual weapons delivery, specialized capability (TGP, HTS, etc) employment procedures/techniques (if applicable), tactical egress, threat reactions, mission reconstruction and debriefing.

6.3.3.12. **IPUG-CERT--Mission Objectives.** Complete a successful IP evaluation IAW AFI 11-2F-16V2, using a profile simulating unit tasking.

6.3.3.13. **IPUG-JHMCS (Optional)--Mission Objectives**. Assessment of the IP's ability to brief, lead, and debrief a BFM JHMCS qualification mission. Specific Mission Tasks: Weapons system checks, G-awareness exercise, JHMCS display orientation, fence check, off-boresight radar/missile cueing exercise, 1v1 offensive/defensive/high aspect BFM, front hemisphere missile defense.

6.3.3.14. **IPUG-Day Transition (Optional)--Mission Objectives.** F-16D Desired. Introduce upgrading IP to dual cockpit instruction, if RCP qualification is desired, selected transition/instrument demonstrations, maneuvers, and procedures. Specific Mission Tasks: Briefing, joinup, tanker rendezvous, AAR, basic and tactical formation, pitchouts and rejoins, flight control demonstration, confidence maneuvers, aircraft handling maneuvers, aerobatics, unusual attitude recoveries, instrument approach, touch-and-go landing, SFO, VFR pattern and landing (if desired), debrief/flight reconstruction.

6.3.3.15. **IPUG-Night Transition (Optional)--Mission Objectives.** F-16D Desired. Introduce upgrading IP to instructing night transition procedures.  Specific Mission Tasks:  Briefing, RCP takeoff, trail departure, joinup, tanker rendezvous, NAAR, basic formation, pitchouts and rejoins, intercepts, debrief.

6.3.4. **Instructor Evaluation.** A completed formal evaluation (AF Form 8) sortie is required by the SQ/CC or designated FE prior to performing instructor duties **(T-2).** Failure to complete scheduled training events (i.e., RCP-landing, AAR, etc.) need not delay certification.  The SQ/CC will certify new instructor's status, including any restrictions, in appropriate written format (AF Form 8, letter, gradesheets, ARMS, etc) **(T-2).**

**6.4. Mission Commander (MC) Upgrade.** This program establishes guidelines for upgrade to MC.  MC upgrade programs will be tailored to meet specific unit taskings (i.e., Defense Suppression units will include Electronic Combat related academics and training assets). **(T-3).**

6.4.1. **Responsibilities:**

6.4.1.1. The MC is responsible for planning coordinating, briefing, executing, and debriefing joint/composite force employment packages.  Certified MCs are authorized to lead joint/composite force missions.

6.4.1.2. MCs may delegate authority and responsibility for a portion of the mission to a secondary MC.  For example, a MC flying in an A/S weapons system may designate a MC in an A/A weapons system to be in charge of the A/A portion of the mission.

6.4.2. **MC Prerequisites.** Squadron commanders will consider ability, judgment, technical expertise, skill, and experience when selecting pilots for mission commander upgrade. Minimum qualification is four-ship FL **(T-3).**

6.4.3. **Ground Training.** Upgrading MCs must satisfactorily complete the following unit developed blocks of instruction prior to certification as a MC **(T-2).**

6.4.3.1. **Mission Planning Considerations.** Range space and availability, ATC restrictions/considerations/flight plans, air refueling operations, inter-unit coordination, air-to-air and air-to-surface force integration, IADS penetration/avoidance, on-range controlling agencies coordination, GCI coordination. Review appropriate AFTTP 3-1 volumes for specific mission commander checklists and considerations.

6.4.4. **Flying Training.** As a minimum, the upgrading MC will observe a certified MC during the planning, briefing, flight, and debriefing of at least one composite force mission. Prior to certification, the upgrading MC will then plan, brief, fly, and debrief a minimum of one mission under the supervision of an IP or Squadron Supervisor who is MC qualified **(T-2).**

6.4.4.1. Consider unit taskings to drive force composition, adversaries, and minimum flight size.

6.4.4.2. The MC will determine overall upgrade mission effectiveness in case of fallout **(T-3).**

6.4.5. **Certification.** Following satisfactory completion of the above requirements, the SQ/CC will certify a new MC by placing a letter of certification in the training folder and indicating qualifications on Letter of Xs **(T-2).**

**6.5. Simulator Instructor (SI).** The following SIM mission profiles are guidelines to be used to train and qualify selected simulator instructors to operate the IOS. The contractor simulator instructor program will be IAW the appropriate contract. SQ/CCs will determine the number of SIs required to perform unit mission. The required supervision for this upgrade program is an IOS-qualified/current SIM instructor **(T-3).**

6.5.1. **Academic Training.** Prior to the first IOS mission, the USI will complete the following unit developed blocks of instruction: **(T-3).**

6.5.1.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, instructor relationship, training facilities, and publications.

6.5.1.2. **Techniques of Flight Instruction.** Training objectives and environment; maneuver demonstration, performance, and review; recognition and analysis of common errors.

6.5.1.3. **Conduct of Flight Briefing.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debriefing techniques.

6.5.1.4. **Conduct of Phase Briefings.** Techniques for briefing, use of visual aids, review of applicable briefings.

6.5.1.5. **Evaluations.** Grading systems and preparation/use of gradesheets.

6.5.2. **Mission Profiles (Based on Simulator Capabilities):**

6.5.2.1. **SI-1, IOS Operations.** Mission initialization, CRT page review and modification, keyboard operation, light pen operation, emergency shutdown, record/playback, hard copy, performance, and procedures monitoring.

6.5.2.2. **SI-2, IOS Operations.** Tactics mission file, console-operated air intercepts and options, A/A weapons scoring, ground threats and modifications, A/S weapons scoring, surface-to-air engagement scoring, program and simulator freeze, mission parameter modifications.

6.5.2.3. **SI-3, Practical Exercise.** The USI will conduct a regularly scheduled simulator mission from the IOS under supervision of an IOS-qualified instructor **(T-3).**

6.5.3. **Certification**. Following successful completion of SI-3, the SQ/CC will certify the pilot's SI status in appropriate written format (letter, ARMS, gradesheet, etc.) **(T-2).**

**6.6. Targeting Pod (TGP):** For the purposes of this upgrade, any TGP (LANTIRN, LITENING, Sniper) may be used. Pilots upgrading from LANTIRN to ATP (LITENING or Sniper) see specific requirements in paragraph **6.6.3** The program outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs and/or upgrading pilot's previous experience, qualifications, and documented performance. **(T-3).** Pilots will not use TGP systems for which they have not been formally trained **(T-2).**

6.6.1. **Ground Training.** Initial ground training will include instruction that covers IR theory and mission planning, targeting pod description and operation, medium altitude TGP operations and tactics, PW II/III description and employment, non-LGB employment, and TGP-assisted IAM employment. If no training devices are available, substitute a detailed discussion of procedures and techniques and document it on the gradesheet. **(T-3).**

6.6.1.1. **SIM TGP-1, Medium Altitude Introduction – Mission Objectives:** Introduce aircraft and TGP-specific avionics operations, PW II/III deliveries, and buddy lasing. Specific Mission Tasks: TGP ground operations, tuning/boresight procedures, weapons systems/fence checks, medium altitude ingress, TGP system updates, PW II level deliveries, buddy lasing procedures, PW III mode 3 and mode 4 attacks, and unusual attitude recoveries.

6.6.1.2. **SIM TGP-2, Medium Altitude Tactics – Mission Objectives:** Introduce medium-altitude threat reactions, GP and IAM TGP-assisted weapons deliveries. Specific Mission Tasks: TGP ground operations, tuning/boresight procedures, weapons systems/fence checks, medium altitude ingress, TGP system updates, medium altitude threat reactions, TGP-assisted medium altitude GP and IAMs attacks, TGP-assisted Maverick attacks (if available), PW II level deliveries, and unusual attitude recoveries.

6.6.2. **General Instructions for Flying Training:** All sorties will be supervised by an IP or FL-qualified squadron supervisor who is TGP qualified **(T-2).** Missions may be scheduled as a two-, three-, or four-ship. Students may use NVGs on any night mission if they are NVG-qualified. At least one day and one night sortie must be accomplished in order to be considered fully qualified **(T-3).**

6.6.2.1. **TGP-1, Medium Altitude Introduction** – Mission Objectives: Introduce medium altitude PW II TGP employment. Introduce TGP A-A operations. Specific Mission Tasks: Mission planning, Preflight avionics and TGP (BIT, MFD tuning, and gain/level procedures), medium-altitude ingress, TGP system updates, air-to-air TGP operations, TGP-assisted medium-altitude GP attacks, PW II level/diving attacks, PW II simultaneous impacts, PW II buddy-lase attacks, ATP events (LSS, IR Marker).

6.6.2.2. **TGP-2, Day/Night Medium Altitude** – Mission Objectives: Introduce IAMs and PW III employment. Practice TGP A-A operations. Specific Mission Tasks: IAM mission planning, preflight avionics, medium-altitude ingress, ATP-cued IAM attacks, air-to-air TGP operations, PW III level/diving attacks, buddy-lase, ATP events (LSS, IR Marker).

6.6.2.3. **TGP-3, Day/Night Proficiency** – Mission Objectives: Demonstrate proficiency in PW II & III attacks, buddy lase attacks, and TGP-assisted general purpose attacks. Specific Mission Tasks: Mission planning, Preflight avionics and TGP (BIT, tuning, and focus procedures), Medium-altitude ingress, Medium-altitude diving/level attacks, PW II attacks with live/inert GBU(s), PW II simultaneous impact attacks, PW II buddy lase attacks, ATP events (LSS, IR Marker).

6.6.3. **Advanced Targeting POD (ATP):** This upgrade is intended for pilots upgrading from LANTIRN to ATP (LITENING or Sniper). For pilots not previously TGP qualified, see paragraph **6.6** The upgrade missions should focus on TGP differences including: ground operations, in-flight checks, medium altitude employment, and advanced capabilities. ACA/ONE with TGP/ATP is specialized training consisting of one day and one night sortie (reference paragraph **6.6.4**). An additional day or night sortie will be accomplished for inexperienced aircrew. The requirements for the ATP upgrade are: **(T-3).**

6.6.3.1. **Academics** – Taught by an ATP-qualified instructor pilot.  Discuss LANTIRN/ATP differences (at a minimum LSS/LST, IR marker and strafe-TISL/strafe sparkle tactics). **(T-3).**

6.6.3.2. **SIM ATP-1 or ATP-1, Medium Altitude Introduction** – A day or night A/G mission.  It can be accomplished in the simulator or aircraft.  Mandatory tasks are LSS/LST and high angle strafe –TISL. **(T-3).**

6.6.3.3. **ATP-2, ATP Proficiency:** Night A/G mission.  Mandatory tasks are IR marker employment and high angle strafe-sparkle. **(T-3).**

6.6.4. **ACA/ONE with TGP:** This special mission upgrade is required for pilots flying ACA/ONE with a TGP (LANTIRN or ATP) **(T-2).** For low altitude portions of this upgrade, proficiency in aircraft handling, tactical formation, intercept, offensive maneuvering, defensive reactions and TGP cross-check are essential. Discuss LOWAT level intercepts (horizontal turn radii, preferred aspects, pursuit options), fuel rules of thumb, required turning room, maximum dive angle restrictions, low altitude weapons employment (weapons envelope/rules of thumb, weapons selection, missile pursuit curves, minimum launch altitudes), low altitude intercept (radar capabilities including detection, LOS problems, false targets, and sorting), low-to-high, high-to-low, and co-altitude intercepts (altitude, airspeed, and power considerations, vertical vice offset conversions, conversion aborts, high/low speed targets, use of HUD, and VID procedures against a low/slow speed target with emphasis placed on threat VID procedures IAW AFTTP 3-1/3-3 with TGP/ATP. Discuss shadow and VID procedures with TGP/ATP. Discuss TGP cross-check for proper/safe intercepts. **(T-3).**

6.6.4.1. **Special Subjects.** Discuss training rules, WX abort procedures, aircraft emergencies, NVG/TGP cross-check, and separation/disengagement considerations. **(T-3).**

6.6.4.2. **Flying Training:  (T-3).**

6.6.4.2.1. **ACA/ONE TGP-1:** Day-TI/Element Air-to-Air Basics with TGP/ATP. Mission objective is to introduce day two-ship Tactical Intercepts with TGP/ATP for the ACA/ONE mission.  Specific Mission Tasks:  single and two-ship intercept procedures with TGP/ATP to include: low-slow VID with ATP/TGP, low-fast VID with ATP/TGP, VID with shadow, and two-ship rotating CAP with shadow.

6.6.4.2.2. **ACA/ONE TGP-2:** Night-TI/Element Air-to-Air Basics with TGP/ATP. Mission Objective is to introduce night two-ship tactical Intercepts with TGP/ATP for the ACA/ONE mission. Specific Mission Tasks: single and two-ship intercept procedures with NVGs and TGP/ATP to include: a) low-slow VID with ATP and NVGs, b) low-fast VID with ATPs and NVGs, c) VID with shadow, d) two-ship rotating CAP with shadow.

6.6.4.2.3. **LOWAT ACA/ONE with TGP/ATP DAY (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship LOWAT/ACA/ONE with TGP/ATP intercepts.

6.6.4.2.4. **LOWAT ACA/ONE with TGP/ATP NIGHT (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship LOWAT/ACA/ONE with TGP/ATP intercepts.

6.6.4.3.  Upon satisfactory completion of these missions, the SQ/CC can certify the pilot to ACA/ONE with TGP/ATP qualified. Inexperienced pilots will perform one additional sortie (day or night) to be qualified **(T-2).**

**6.7. Night Vision Goggle (NVG) Qualification Program:** Any upgrade program (MQT, FLUG, IPUG, MCC, etc) will include use of NVGs during all phases of night flying. **(T-3).** This upgrade is intended for a pilot who has never been qualified with NVGs but is already CMR/BMC/BAQ.  The intent of this program is to produce fully qualified four-ship wingmen, flight leads, and instructor pilots.

6.7.1.  **Status upon Completion:** Completion of the qualification training allows the pilot to perform missions under NVGs at or above minimum safe altitude (MSA) or IAW AFI 11-214, whichever is greater.  See paragraph **6.7.6.8** for requirements to fly below MSA.

6.7.2.  **Qualifications:**

6.7.2.1.  Through NVG-OPSAT(4): Qualified 4-Ship NVG wingman.

6.7.2.2.  NVG-FLUG (Flight Lead Upgrade): Qualified NVG 4-ship flight lead.

6.7.2.3.  NVG-IPUG (Instructor Upgrade): Qualified NVG Instructor.

6.7.2.4.  NVG-LOWAT (Low Altitude Upgrade): Qualified NVG LOWAT pilot

6.7.3.  **Student to Instructor ratio:**  1:1.

6.7.4.  **Ground Training.**  Upgrading NVG pilots must satisfactorily complete the following requirements prior to NVG-FAM **(T-2).**

6.7.4.1.  **Academics.** Academic instruction must include Air Force Research Labs (AFRL) or equivalent NVG academics, F-16 specific academics (ACC/TRSS has developed these academics (ACC/TRSS NVG Refresher Academics #CT-19 (CD ROM) and will distribute upon request), and an NVG Phase Brief.  Each Operations Group is required to have one highly qualified and certified instructor (AFRL NVG Platform IP / Current or Former FTU NVG IP / WIC graduate) to teach these academics.  This instructor may certify additional instructors within the Operations Group. **(T-3).**

6.7.4.2.  **Device Training.**  Device training will include: **(T-2).**

6.7.4.2.1.  **NCT (Night Cockpit Trainer)-1--Mission Objectives.** Introduce NVG Cockpit Set-up, NVG procedures, and emergency situations. Specific Tasks:  NVG ground operations, use of interior and exterior aircraft lighting, Taxi/Take-off, enroute formations, battery change, emergency/egress procedures, recognition/prevention of spatial disorientation, unusual attitude recoveries, night/NVG instrument crosscheck, task saturation/prioritization, and potential FOD hazards associated with NVG use.

6.7.5.  **Special Instructions (SPINS).**

6.7.5.1.  NVG-FAM should be flown dual with the IP in the RCP.

6.7.5.2.  UP must fly at least 1 low illumination sortie **(T-2).**  It is desired to fly at least some portion of an upgrade sortie in the period of time between 30 minutes and one hour after sunset, or in the period of time between one hour and 30 minutes prior to sunrise.

6.7.5.3.  NVG sorties will be flown in prescribed order **(T-2).**

6.7.5.4.  NVG IP must complete a total of 10 NVG sorties, including upgrade sorties, before performing NVG IP duties **(T-2).**

6.7.6. **Flying Training.** All NVG syllabus sorties will be under the supervision of a qualified NVG IP.  Upgrade sorties will be dedicated to use of NVGs IAW the following sorties **(T-2).**

6.7.6.1. **NVG-FAM, Basic NVG Familiarization - Mission Objectives.** Introduce NVG formation, cross-check, threat reactions, and baseline intercepts.  Specific Mission Tasks**:**  NVG adjustment procedures, cockpit preparation, trail departure, ranging exercise, NVG G-awareness exercise, aircraft lighting demonstration, tactical 2-ship formation positions with a mixture of external lighting options including covert lighting, reduced lighting and lights, afterburner demonstration, Chaff/Flare demonstration, tactical turns and NVG assisted rejoins, lost wingman/blind exercise, AAMD and surface-to-air threat reactions, controlled maneuvering (hi illumination and D-model).

6.7.6.2. **NVG-INTRO, Single Ship Air-to-Air Introduction - Mission Objectives**: Introduce NVG air-to-air employment versus both high and low-speed targets.  Specific Mission Tasks: Practice NVG tactical formation maneuvering and 1 v 1 air-to-air employment with NVGs.  1 v 1 intercepts to include: a) BVR Launch and Leave, b) Low to high conversion, c) High to low conversion (Low speed target), d) AAMD, e) BVR launch and leave with short range recommit.   Controlled maneuvering (High illumination).

6.7.6.3. **NVG-TI, Element Air-to-Air Basics - Mission Objectives**:  Introduce two-ship tactical intercepts, air-to-air threat reactions and all aspect missile defense.  Specific Mission Tasks: 2 v X air-to-air employment with NVGs, single ship and element RMD procedures with NVGs. Tactical intercepts to include: a) Sorting pass, b) BVR launch and leave, c) Single-side offset, d) Element launch and react (Spike-naked-press gameplan), e) Element AAMD.

6.7.6.4. **NVG-SAT(4), 4-Ship Basic Air to Ground - Mission Objectives:** Introduce NVG weapons delivery, surface-to-air threat reactions, and 4-ship NVG formation. Specific Mission Tasks:  Navigation (Medium altitude or low altitude [Illumination Permitting, reference paragraph **6.7.6.8** for low altitude requirements], medium altitude diving deliveries, medium altitude multi-ship attacks, surface-to-air threat reactions, 4-ship NVG formations and maneuvering.

6.7.6.5. **NVG-OPSAT(4), 4-Ship SAT (Opposed) - Mission Objectives:** Demonstrate proficiency in opposed 4-ship unit specific tactics.  Specific Mission Tasks:  Navigation (Medium altitude or low altitude [Illumination Permitting, reference paragraph **6.7.6.8** for low altitude requirements]), 4-ship unit specific tasks, surface-to-air threat reactions, air-to-air threat reactions, 4-ship tactical intercepts to include:   a) CAP mechanics/formations, b) BVR and VID tactics employed from 4- ship visual formations.

6.7.6.6. **NVG-FLUG, Flight Lead Upgrade Unit/Mission Specific - Mission Objectives:** Demonstrate proficiency in leading tactical employment of unit mission specific tasks in an increased threat scenario  Specific Mission Tasks:  Navigation (Medium altitude or low altitude [Illumination Permitting, reference paragraph **6.7.6.8** for

low altitude requirements]), unit specific tasks, surface-to-air threat reactions, air-to-air threat reactions. Adversaries are desired.

6.7.6.7. **NVG-IPUG, NVG Instructor Pilot Upgrade – Mission Objectives**: Demonstrate proficiency in instructing two-ship tactical intercepts, air-to-air threat reactions and all aspect missile defense. **Mission Overview:** Primary focus of this sortie is to instruct 2 v X air-to-air employment with NVGs. Primary emphasis should be placed on how NVGs enhance night air-to-air element formations, rather than complex tactical employment scenarios. Additional emphasis should be placed on single ship and element AAMD procedures with NVGs. Specific Mission Tasks: Tactical intercepts to include: a) Sorting pass, b) BVR launch and leave, c) Single-side offset, d) Element launch and react (Spike-naked-press gameplan), e) Element AAMD.

6.7.6.8. **NVG LOWAT, Low Altitude Upgrade.** All of the following tasks must be completed to allow tactical maneuvering below MSA under high illumination (altitudes IAW AFI 11-214) **(T-2).** These events may be flown during the basic NVG upgrade, as time permits, or may be combined into an additional upgrade sortie. If flown during the basic NVG upgrade, these events may be spread over multiple sorties. However, the events will be flown in order and annotated on the UP's gradesheet **(T-2).**

6.7.6.8.1. Single ship low altitude tactical navigation (IP Chase).

6.7.6.8.2. Single ship low altitude familiarization (IP Chase) to include: a) Level hard turns, b) 30 degree pitch up/20degree pitch down, c) threat reactions.

6.7.6.8.3. Low altitude tactical formations to include turns and element threat reactions.

6.7.6.8.4. Low altitude tactical intercepts to include: a) Low to high conversion, b) High to low conversion, c) AAMD.

6.7.6.8.5. High Angle Strafe on visually acquired target.

6.7.6.9. **NVG High Angle Strafe Low Altitude Upgrade.** This tailored task list is only for NVG High Angle Strafe in the Low Altitude Environment and does not imply a pilot is qualified for all NVG low altitude operations below the MSA. All of the following tasks must be completed to execute High Angle Strafe below MSA under high illumination (altitudes IAW AFI 11-214) **(T-2).** These events may be flown during the basic NVG upgrade, as time permits, or may be combined into an additional upgrade sortie. If flown during the basic NVG upgrade, these events may be spread over multiple sorties. However, the events will be flown in order and annotated on the UP's gradesheet **(T-2).** This is a one time upgrade and does not have a currency.

6.7.6.9.1. Single ship low altitude familiarization (IP Chase) to include: a) Level hard turns, b) 30 degree pitch up/20degree pitch down, c) threat reactions.

6.7.6.9.2. Low altitude surface attack tactical weapons deliveries. Primary low altitude surface attack training will be tactical weapons delivery employing high angle strafe (HAS) demonstrating proficiency.

**6.8. Forward Air Controller (Airborne) (FAC[A]) Upgrade.** This program establishes the minimum guidelines for those pilots identified by the SQ/CC for FAC(A) upgrade training. Students must complete all missions in the following profiles to gain FAC(A) certification IAW

the current Joint Close Air Support FAC(A) Memorandum of Agreement (JMOA) and will not proficiency advance.  Squadrons may not deviate from these profiles, and OG/CC is the waiver authority for all FAC(A) training **(T-3).**

6.8.1.  **Upgrade Administration.**  FAC(A) certification (upgrade) training will be IAW the current Joint Close Air Support FAC(A) Memorandum of Agreement (JMOA) **(T-2).** The JMOA defines the Joint Mission Task List (JMTL) for a FAC(A) to attain certification and maintain qualification/currency, and the SQ/CC will ensure all of these JMTLs are met in the course of training.  Following the upgrade, FAC(A)s will be capable of performing all FAC(A) mission tasks defined in the current JMOA.  OG/CCs or their designated squadron commander representatives have authority to waive any JMOA experience requirements for upgrade entry based on commanders' judgment of experience level **(T-3).**  Where conflicts exist between this FAC(A) Upgrade and the Joint Close Air Support FAC(A) Memorandum of Agreement (JMOA), the MOA shall have precedence.

6.8.1.1. To ensure standardization and efficiency, MAJCOMs/Fighter Wings are authorized and encouraged to adopt this instruction as their sole guidance for conducting FAC(A) training in lieu of local syllabi.

6.8.1.2.  Training at the F-16 FTU is available to reduce burden on home-station training.  AETC FTU OG/CC is responsible for coordinating and adjudicating FTU course apportionment IAW MAJCOM requirements.  When the FTU is conducting training for other MAJCOM pilots, AETC FTU OG and unit OG are the combined waiver authority for prerequisites or waivers **(T-3).**

6.8.1.3.  Units will ensure FAC(A)s maintain qualification and currency IAW the JMOA **(T-3).** SQ/CCs must ensure upgrades meet JMOA specific requirements for number and types of controls.  Re-qualification will include at least one day and one night mission defined by the SQ/CC that meet re-qualification control requirements.   Pilots will log any FAC(A) evaluations required by the JMOA in either their CAS control log and/or with a squadron standard gradesheet.  These evaluations do not require a Form 8, and do not require a SEFE to conduct the evaluation.  Qualification as a FAC(A) IP also qualifies the IP to conduct FAC(A) evaluations.

6.8.1.4.  Prior to FAC(A) certification, the SQ/CC will personally interview the UP and review FAC(A) responsibilities and authority.  The SQ/CC will certify the new FAC(A)'s status, including any restrictions, in appropriate written format (grade sheet, training folder, Letter of Xs, etc.).  The FAC(A) will log all controls accomplished during and after training in the JCAS AP MOA Appendix A format as part of their training documentation **(T-3).**

6.8.1.5. Pilots identified for FAC(A) upgrade must meet the following minimum requirements **(T-3).** Track 1 produces mission capable F-16 FAC(A)s. Track 2 produces FAC(A) instructors.  Track 3 produces a FAC(A) pilot and instructor from a previously unqualified F-16 WIC graduate.

6.8.1.5.1.  Entry Prerequisites - Track 1

6.8.1.5.1.1.  Qualified and current four-ship flight lead.

6.8.1.5.1.2.  Qualified and current NVG flight lead.

6.8.1.5.2.  Entry Prerequisites - Track 2

6.8.1.5.2.1.  Current and Qualified F-16 FAC(A)

6.8.1.5.2.2.  Current and Qualified F-16 Instructor

6.8.1.5.3.  Entry Prerequisites - Track 3

6.8.1.5.3.1.  Current and Qualified F-16 WIC graduate

6.8.2.  **FAC(A) Ground Training.** To execute FAC(A) responsibilities in joint operations, pilots must have completed a Joint FAC(A) Training and Standardization Board (JFTSB) sanctioned academic program IAW AFI 13-102, unless specified otherwise by MAJCOM/A3 **(T-2).** The FAC(A) Joint Firepower Course (FACJFC) at the Air Ground Operations School (AGOS) meets this requirement. Course attendance is required prior to performing operational FAC(A) duties **(T-2).** If a FACJFC class is not readily available, OG/CCs may approve UPs to attend another accredited FAC(A) course **(T-3).** Units will develop additional local training in the following areas: **(T-2).**

6.8.2.1.  **F-16 Specific FAC(A) academics.** Specific F-16 TTPs for FAC(A) execution to include GOB build, mission planning, cockpit preparation, C2 agency coordination and CAS Area of Operations (AO) entry, preparation, exit, tactical control and attack execution, and contingency planning.

6.8.2.2.  **Ground Training Currency.** If a student has not attended ground school within 6 months of the start of flying training, then the student will accomplish a review of the common FAC(A) academics maintained on the MAWTS-1 website.

6.8.2.3.  **FAC(A) Simulator Training.** Units will incorporate simulator profiles into FAC(A) training to the maximum extent possible, and will use the highest fidelity simulators available for training. Each Air Strike Control (ASC) simulator will include two 45-minute vulnerability windows that represent the missions and tasks stated:

6.8.2.3.1.  **ASC Sim–1 FAC(A) Basics - Mission Objectives:** Introduce ASC mission tasks and FAC(A) techniques IAW ASC-1 and 2 profiles.  Conduct the following additional tasks along with these profiles:  Airborne GOB build, integration of short and long range indirect fires, bomber integration, airborne calls-for-fire (CFF), wingman utilization (radio relay, marking, recce, target acquisition), and TAC(A) employment.

6.8.2.3.2.  **ASC Sim–2 Advanced FAC(A) Tasks - Mission Objectives:** Introduce ASC mission tasks and FAC(A) techniques IAW ASC-3 and 4 profiles. Conduct the following additional tasks along with these profiles: Low altitude freefall munitions attack and control, low-altitude PGM tactics, low-altitude rocket loft, low-altitude CFF, advanced CAS SEAD/DEAD coordination and deconfliction, and a CSAR scenario as the on-scene commander.

6.8.3.  **FAC(A) Flight Training Administration.**

6.8.3.1.  All FAC(A) upgrade training will be under the supervision of a FAC(A) IP **(T-2).** Unless specified otherwise, the IP will fly in a deconflicted formation position to properly assess UP performance **(T-3).** Throughout the upgrade, IP will prepare UPs to

successfully accomplish all aspects of single-ship and two-ship tactical employment **(T-2).**

6.8.3.2.  A dedicated FAC(A) certification mission, normally ASC-6, is required and will be flown with the SQ/CC or designated representative **(T-3).**

6.8.3.3.  Advanced Targeting Pod (ATP) use is required during every mission unless waived by OG/CC based on ATP availability **(T-3).**

6.8.3.4.  Students must execute at least one control with an actual JTAC or JFO **(T-2).**

6.8.3.5.  Unaccomplished Tasks.  SQ/CCs may certify a student with unaccomplished tasks, but the student will remain in training status and will not be authorized to conduct operational FAC(A) missions until the task is completed and logged in their training documentation as complete **(T-2).**

6.8.3.6.  Mission Planning.  Each flying mission will include appropriate planning, advisory, and enroute passage/coordination training IAW the JMOA.  This training will include JTAR creation/routing, ground commander coordination, mission planning and product preparation, briefing, C2 agency coordination, AO ingress/egress, In-Flight Report, and BDA reporting **(T-2).**

6.8.3.7.  Students may control/employ simulated assets for any JMTL requirements. Squadrons will schedule actual assets to the maximum extent possible, must meet JMOA actual ordnance control requirements **(T-3)**, and should dedicate at least two airborne CAS assets for each mission.

6.8.3.8.  ASC-SIM-1 is a prerequisite for ASC-1, ASC-SIM-2 is a prerequisite for ASC-3. **(T-3).**

6.8.4.  **FAC(A) Missions – Track 1.**  OGs may tailor Track 1 events **(T-3).**

6.8.4.1.  **ASC-1 (Track 1) FAC(A) Introduction:**

6.8.4.1.1.  **Objectives**:  Introduce medium-altitude deconfliction, target marking, and multi-flight attack coordination.

6.8.4.1.2.  **Specific Mission Tasks:** FAC(A) mission planning and brief, airborne asset deconfliction, self-generation and passage of coordinates to strike assets, long-range indirect fires integration / deconfliction, coordination of attacks on the same target area from multiple flights/assets, medium-altitude 2.75" WP rocket employment.

6.8.4.1.3.  **Control Goals:**  2 x Type 1, 2 x Type 2.

6.8.4.1.4.  Conduct 2.75" rocket employment when assets are available.  Rocket employment should not keep a student from achieving certification, but accomplish rocket employment as soon as practical if not completed in the upgrade process.

6.8.4.2.  **ASC-2 (Track 1) Day Medium Altitude FAC(A) in an urban CAS environment:**

6.8.4.2.1.  **Objectives**:  Introduce medium altitude FAC(A) tactics, introduce FAC(A) in an urban environment, practice air and fires deconfliction/control techniques in a FAC(A) role.

6.8.4.2.2. **Specific Mission Tasks:** FAC(A) mission planning, coordination brief, and flight brief, CAS asset deconfliction and control, Fixed Wing (FW) control, Unmanned Aerial System (UAS) integration and control, Types 1 and 2 control, coordinate generation, Laser-Spot Search and Track (LSS/T), laser-guided and coordinate dependent weapon employment, indirect fires integration and deconfliction, Troops-in-Contact (TIC).

6.8.4.2.3. **Control Goals:** 2 x Type 1, 2 x other types of control.

6.8.4.3. **ASC-3 (Track 1) Day Adverse WX / Low-Altitude FAC(A) in a Major Combat Operations (MCO) environment:**

6.8.4.3.1. **Objectives**: Introduce low altitude FAC(A) tactics and indirect fire SEAD in a FAC(A) game plan, practice air and fires deconfliction/control techniques in an adverse-WX FAC(A) role.

6.8.4.3.2. **Specific Mission Tasks:** FAC(A) mission planning and flight brief, CAS asset deconfliction and control in an adverse WX environment with at least one TOT timing deconfliction control, target coordinate generation and location passage, low-altitude control and buddy-lase of LGBs released from above the WX, low-altitude control of PGM loft, low-altitude 2.75" WP rocket mark and control of unguided weapons, indirect fires integration, deconfliction, and SEAD.

6.8.4.3.3. **Mission SPINS:** Broken WX deck from 8,000 feet AGL to 15,000 feet MSL or 2,000 feet below airspace ceiling.

6.8.4.3.4. **Control Goals:** 2 x Type 1, 2 x other types of control.

6.8.4.4. **ASC-4 (Track 1) Day Medium-Altitude FAC(A) in a MCO environment:**

6.8.4.4.1. **Objectives**: Introduce airborne SEAD/DEAD as part of a FAC(A) game plan, Practice FAC(A) tactics in a day, MCO environment.

6.8.4.4.2. **Specific Mission Tasks:** FAC(A) mission planning and flight brief, CAS asset deconfliction and control, Types 1, 2, and 3 control, control of GP weapons delivery, TIC, FW and Rotary Wing (RW) integration,  Airborne SEAD/DEAD, indirect fire integration, deconfliction, and at least 1 x CFF.

6.8.4.4.3. **Control Goals:** 2 x Type 1, 1 x Type 3, 2 x other types of control.

6.8.4.5. **ASC-5 (Track 1) Night Medium Altitude FAC(A) in an urban CAS environment:**

6.8.4.5.1. **Objectives**: Introduce night FAC(A) tactics, practice FAC(A) in an urban environment.

6.8.4.5.2. **Specific Mission Tasks:** FAC(A) mission planning and flight brief, CAS asset deconfliction and control, FW control, UAS integration and control, Types 1 and 2 control, AC-130 integration, CSAR OSC exercise.

6.8.4.5.3. **Control Goals:** 2 x Type 1, 2 x other types of control.

6.8.4.6. **ASC-6 (Track 1) Night Medium-Altitude FAC(A) in a MCO environment:**

6.8.4.6.1. **Objectives**: Demonstrate proficiency in FAC(A).

6.8.4.6.2. **Specific Mission Tasks:** FAC(A) mission planning and flight brief, CAS asset deconfliction and control, TIC, FW and RW integration, indirect fire integration and deconfliction with CFF.

6.8.4.6.3. **Control Goals:** As required to complete JMOA requirements.

6.8.5. **FAC(A) Missions – Track 2.** OGs may tailor Track 2 events **(T-3).**

6.8.5.1. **ASC-21 (Track 2) Day/Night Medium-Altitude FAC(A) in a MCO environment:**

6.8.5.1.1. **Objectives**: Execute FAC(A) to an IP-level of proficiency.

6.8.5.1.2. **Specific Mission Tasks**: IAW ASC-4 profile day or night

6.8.5.2. **ASC-22 (Track 2) Day/Night Medium-Altitude FAC(A) in a MCO environment:**

6.8.5.2.1. **Objectives**: Demonstrate proficiency as a FAC(A) IP from the IP formation position.

6.8.5.2.2. **Specific Mission Tasks**: IAW ASC-4 or ASC-6 profile (day or night), student should develop, coordinate, and execute scenario for a simulated or actual Track 1 student.

6.8.6. **FAC(A) Missions – Track 3.** This track will certify a current and qualified WIC graduate or upgrading WIC student as a FAC(A) and FAC(A) instructor. A WIC graduate with a break in flying assignment (staff, etc.) should execute a Track 1 upgrade. Track 3 students must meet all JMOA requirements to be certified as FAC(A)s. OGs may tailor Track 3 events **(T-3).**

6.8.6.1. **ASC-31 (Track 3) Day Low-Altitude FAC(A): Objectives**: Introduce low-altitude FAC(A). Execute low-altitude element employment to an IP-level of proficiency. Specific Mission Tasks: IAW ASC-3 profile.

6.8.6.2. **ASC-32 (Track 3) Day Medium-Altitude FAC(A) in a MCO environment:**

6.8.6.2.1. **Objectives**: Execute day medium altitude FAC(A) to an IP-level of proficiency.

6.8.6.2.2. **Specific Mission Tasks**: IAW ASC-4 profile.

6.8.6.3. **ASC-33 (Track 3) Day or Night Medium Altitude FAC(A) in an urban CAS environment:**

6.8.6.3.1. **Objectives**: Introduce night FAC(A) (if possible), urban FAC(A), and CSAR OSC. 6.8.6.3.2. **Specific Mission Tasks**: IAW ASC-5 profile.

6.8.6.4. **ASC-34 (Track 3) Night Medium Altitude FAC(A) in an MCO CAS environment:**

6.8.6.4.1. **Objectives**: Execute night FAC(A) to an IP-level of proficiency.

6.8.6.4.2. **Specific Mission Tasks**: IAW ASC-6 profile.

**6.9. Harm Targeting System (HTS) Upgrade (Blk 40/42 squadrons).** This program establishes guidelines for pilots to qualify on the HARM Targeting System (HTS). The program

outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs and/or upgradee's previous experience, qualifications, and documented performance. Accomplish HTS specific events to ensure pilots are proficient in all aspects of mission planning and aircraft avionics necessary to employ HTS capabilities.  At a minimum, the training will consist of academics, one simulator, and one sortie flown with HTS **(T-3).**

6.9.1. **Ground Training.** Ground training will consist of unit developed academics and simulator missions **(T-3).**

6.9.1.1. **HTS Academics.** Academics will cover HTS preflight and operations, threat capabilities, threat detection using HTS, multi-ship HTS functions and mission planning to include use of the JMPS and TMT creation and usage **(T-3).**

6.9.1.2. **HTS Simulator.** Any simulator device which fully models the HTS capabilities may be utilized for training (UTD, MTC, DTT). Simulator mission profiles should be integrated with upgrade flight training missions when practical and are designed to introduce and practice cockpit sensor management, HTS employment, comm and Data Link (DL) operations. The simulator will introduce the pilot to multi-HTS TTPs and capabilities such as Angle-Angle and PT ranging **(T-3).**

6.9.2. **Flying Training.** All HTS upgrade sorties will be under the supervision of a HTS-qualified IP or qualified squadron supervisor **(T-2).** Upgrade sorties should be flown with a functional HTS pod and a TMT or live emitter. HTS is desired, but not required for formation members if flown as a 2-ship or greater. VTR documentation of HTS threat detection is required **(T-3).**

6.9.2.1. **HTS-1, Operations--Mission Objectives.** Introduce HTS operations, comm, DL procedures.  Specific Mission Tasks:  Preflight, ground operations, threat detection using HTS, threat reactions and DL usage **(T-3).**

**6.10. Harm Targeting System and Suppression of Enemy Air Defenses (SEAD) Upgrade.** This program establishes guidelines for pilots to qualify in the AGM-88 HARM and HARM Targeting System (HTS).  The program outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs and/or upgradee's previous experience, qualifications, and documented performance **(T-3).**

6.10.1. **Ground Training.** Ground training will consist of unit developed academics and simulator missions.  Academics will cover ALIC, HARM and HTS preflight and operations, threat capabilities, SEAD and Force Protection (FP) tactics, and SEAD mission planning to include HTSP loadfile building and the use of JMPS.  Simulator mission profiles will be integrated with upgrade flight training missions and are designed to introduce and practice cockpit management, HTS employment, air-to-surface and air-to-air threat reactions, HARM as Sensor (HAS) and Position Known (POS) deliveries, and Data Link (DL) operations **(T-3).**

6.10.2. **Flying Training.** All HTS/SEAD upgrade sorties will be under the supervision of a SEAD-qualified IP **(T-2).** Upgrade sorties will be dedicated SEAD missions with CATM and functional HTS pod.  VTR documentation of the HARM/HTS display from threat detection to simulated missile launch is required. SEAD-4, Night SEAD, may be flown after the upgradee is certified CMR/BMC.  Sylabus is tailorable **(T-3).**

6.10.2.1. **SEAD-1, HARM Employment and Introduction to HTS Operations--Mission Objectives.** Practice weapon preflight and ground operations, employ HARM against active radar emitters using HAS/EOM/RUK delivery modes, introduce HTS operations, accomplish weapon qualification. Specific Mission Tasks: Preflight, ground operations, chased medium/low altitude HARM engagements, HARM employment using HAS, POS, and DL delivery modes, threat reactions, weapon qualification.

6.10.2.2. **SEAD-2, Two-Ship SEAD--Mission Objectives.** Introduce two-ship HTS tactics in medium/low altitude and low/medium threat environments to include comm, formations, responsibilities, and DL procedures. Practice HARM employment against active radar emitters using the HTS. Specific Mission Tasks: Medium altitude SEAD CAPs, two-ship coordinated attacks using available delivery modes, and threat reactions.

6.10.2.3. **SEAD-3, Four Ship SEAD--Mission Objectives.** Introduce force protection tactics in medium/low altitude and high/low threat environments. Practice HARM employment to support a simulated/actual strike package TOT window. Specific Mission Tasks: Force protect a simulated/actual strike package (adversary air desired), coordinated four-ship medium/low altitude SEAD tactics, HARM employment supporting a simulated/actual strike package TOT, and threat reactions.

6.10.2.4. **SEAD-4, Night SEAD--Mission Objectives.** Introduce and practice night HARM employment (two or four ship) against active radar emitters using the HTS in a medium altitude/ low threat environment. Specific Mission Tasks: Medium altitude two/four-ship night SEAD tactics, weapons employment, and threat reactions.

6.10.2.5. **SEAD-5, SEAD/EC Mission Commander--Mission Objectives.** Introduce force protection in a composite strike force. Specific Mission Tasks: Plan, brief, and lead a mission as EC package commander to include ATO break out, integration of additional SEAD assets (RJ, EA-6B, AWACS, etc.), development of the SEAD targeting, employment, and deconfliction plan and strike package support.

**6.11. Helmet Mounted Display (HMD) Qualification Training.** References to HMD in this volume include all types of helmet mounted displays to include the F-16CM Joint Helmet Mounted Cueing System (JHMCS) and the F-16C+ Scorpion Helmet Mounted Integrated Targeting (HMIT) system. The purpose of this program is to train IPs, flight leads, and wingmen in HMD symbology operation and employment. The program outlined below provides a basic starting point and may be modified by SQ/CC based on unit needs and/or previous pilot experience, qualifications, and performance **(T-3).** This upgrade is not required if more than two MQT, FLUG, or IPUG sorties were flown with a HMD. Flight qualification in one type of HMD will satisfy the flying requirement for all types of HMD. Ground and simulator training must be accomplished in the same system (JHMCS/HMIT) required to be used in the aircraft **(T-2).**

6.11.1. **Ground Training.** The following requirements must be accomplished prior to the first sortie: **(T-2)**

6.11.1.1. **HMD Academics.** Initial academics will be accomplished locally or during simulator orientation (if available). Academic courseware will be approved by ACC/TRSS. Academics will be accomplished within 60 days prior to the first HMD qualification sortie. If more than 60 days elapse between academics and the first sortie, pilots will re-accomplish academics **(T-2).**

6.11.1.2. **HMD Simulator Orientation Training.** HMD-modified simulators may not be available for initial orientation training. If a simulator with HMD is readily available to a unit, pilots will complete HMD SIM-1 prior to flight **(T-2).** If a simulator is not available, SQ/CCs will determine if the simulator should be waived, accomplished via a table-top discussion, or accomplished in conjunction with a sortie or upgrade through extended ground operations. **(T-3).**

6.11.1.2.1. **HMD SIM-1 Mission Objectives**. Introduce HMD preflight, ground operations, radar/missile cueing, HMD degraded and failure modes, system limitations, emergency egress, ejection, and human factors implications (display fixation, fatigue, etc.). Specific Tasks: HMD preflight, strap-in, boresight, ground operations, occlusion zone selection, declutter options, switchology/HOTAS functions, radar and missile (AIM-9M/X) cueing and symbols, Link16/SADL symbology, and after landing checks. JHMCS specific tasks include "uplook" boresight and cueing; HMIT specific tasks include HMIT MFD functions, RMFD video display and brightness/contrast adjustment, occlusion zone manipulation, NVG pre-flight focus and fit, and NVG backup mode. Special subjects to be emphasized during all HMD training include the potential for display fixation and ejection risks **(T-2).**

6.11.2. **General Instructions**

6.11.2.1. CMR/BMC pilots may conduct HMD training separately or as part of any upgrade.

6.11.3. **Flying Training**. If HMD SIM-1 is required IAW para **6.11.1.2** the sim will be accomplished prior to the first flight. To the max extent practical, TGPs and AIM-9X CATMs will be utilized during the HMD upgrade missions. The HMD-1 upgrade flight will be tailored to the experience level of the individual pilot and may be modified or waived at the discretion of the SQ/CC. **(T-3).**

6.11.3.1. **HMD-1.** Mission Objectives: Introduce HMD functions and practice A-A/A-G mission sets using the HMD. Specific Mission Tasks: Practice HMD ground procedures, HOTAS operation, radar and missile cueing, (JHMCS only) airborne uplook alignment and cueing, (JHMCS only) airborne realignment, (HMIT only) RMFD video display, radar/missile cueing, A-A/A-G threat reactions, CAS wheel operations, TGP cueing, and HMD marks. HMD-1 will be flown under the supervision of a HMD-qualified IP or HMD-qualified squadron supervisor **(T-2).**

**6.12. Alert Camera.** CMR/BMC pilots with an operational requirement to fly with cameras on active air defense alert (ACA/ONE) missions will complete this training. **(T-2).** Ground training will be coordinated through the squadron training officer and unit intel, and is only required prior to being scheduled for alert duty where flight with a camera is required by an ATO. Possessing an adequate supply of cameras to equip a normally tasked number of alert aircraft and having a plan to accomplish training as described above satisfies the requirement to have an alert camera capability. Use of cameras will be IAW AFI 11-202V3. **(T-2).**

6.12.1. Ground training will cover operation of a basic point-and-shoot camera and intelligence gathering techniques, MAJCOM/local restrictions on the use of cameras in the cockpit, and hands-on cockpit training in the best available training device. **(T-3).**

**6.13. Low Altitude Step-Down Training (LASDT).** This training is normally conducted as part of IQT**.**  It may be used to requalify pilots who are significantly out of currency or to train pilots to a lower category.

6.13.1.  To conduct low altitude operations safely, pilots need to be knowledgeable of aircraft handling and performance characteristics, tactical formation, intercept, offensive maneuvering, defensive reactions, and navigation.  LASDT qualifies pilots to conduct low altitude training (LOWAT) at or below 1,000 feet AGL.  LOWAT block/category certification is required prior to performing unsupervised operations in that block/category **(T-2).**

6.13.2.  To provide a structured approach, the step-down training program is built on a multi-phase training process IAW **Table 6.1**  There is no time limit to progress beyond Category I and progress will be based upon individual pilot proficiency and training availability.  All LASDT missions will be supervised by an IP or FL-qualified SQ supervisor who has completed LASDT training and is current in the LOWAT category being instructed **(T-2).**

**Table 6.1.  LOWAT Categories.**

| Category | Altitude Block | Upgrade Sorties To Certify |
|---|---|---|
| I | 1,000-500 | LASDT-1, LASDT-2, LASDT-3 |
| II | Below 500-300 | LASDT-5, LASDT-6, LASDT-7 |
| III | Below 300-100 | LASDT-8, LASDT-9, LASDT-10 |

6.13.3. Category I qualification is a minimum requirement for CMR status.  Units may accept a transfer pilot's LOWAT qualification from other units.  Category II training may not be conducted during MQT. **(T-2).**

6.13.4.  Entry into LASDT (other than at FTU) requires SQ/CC approval **(T-3).** The altitude to which a pilot is certified is determined by the SQ/CC and based on the lowest altitude at which all tasks can be comfortably performed and proficiency demonstrated.  The goal is proficiency down to the minimum altitude compatible with squadron mission.  Upon successful completion of LASDT training, the SQ/CC will certify the pilot to the minimum approved altitude of the LASDT category **(T-2).**  Squadrons may accept documented LASDT certification for pilots coming from other units/commands.  With SQ/CC approval, low altitude training conducted at a formal course may be used to fulfill applicable requirements of this paragraph.

6.13.5. LASDT will be scheduled and briefed as a primary portion of the mission.  Compatible RAP CT events may be accomplished in conjunction with LASDT as long as the objectives of the LASDT sortie are met.  LASDT will not be flown as an alternate mission **(T-2).**

6.13.6. **Ground Training.** Coverage will support the mission and concept of operations of the squadron, incorporating appropriate portions of AFTTP 3-1 and AFTTP 3-3. F-16.  All academic training will be completed prior to flight training/briefing **(T-2).**

6.13.6.1. **AHC.** LASDT AHC will be IAW AFTTP 3-3. F-16, Low Altitude Training Series exercises **(T-2).** Discuss aircraft performance as it applies to the low altitude environment, to include: control response (low/high speed, over-G potential, speed brake use, stores effects); afterburner (fuel considerations, selection techniques); acceleration/deceleration; level turns; vertical maneuvering; climb/dive/slice recoveries; effects of gross weight, power settings, density altitude, G-loading, and bank angles; terrain avoidance (ridge crossings); HUD use; terrain clearance versus turning room; dangers inherent in overbanking during turns; importance of frequent cross check of aircraft attitude relative to horizon; and operation/use of ground collision avoidance advisory systems. **(T-3).**

6.13.6.2. **Environmental Factors.** Discuss out-of-cockpit visibility and FOV restrictions, sun angle, terrain and G-excess illusions/perceptions, WX considerations, and use of the HUD **(T-2).**

6.13.6.3. **Task Management.** Discuss low altitude tasks and task management/prioritization concept **(T-2).**

6.13.6.4. **Low Altitude Tactical Navigation (LATN).** Discuss dead reckoning, pilotage, INS use/techniques, RADAR, etc **(T-2).**

6.13.6.5. **LATF.** Discuss formations (including line abreast and wedge), hazards at low altitudes, task prioritization, tactical turns, visual lookout/mutual support **(T-2).**

6.13.6.6. **Defensive Reactions.** Discuss visual lookout and mutual support, threat weapons systems envelopes, defensive maneuvering against air-to-air and surface-to-air threats, and flight member deconfliction **(T-2).**

6.13.6.7. Discuss factors affecting low level awareness: airspeeds and maneuverability, formation size and design, formation and pilot responsibilities, environmental effects on visibility, factors influencing individual proficiency and airmanship, route familiarity and complacency, air turbulence, jet wash and bird strike, route obstacles, terrain features, planning and chum responsibilities, route abort procedures, techniques and considerations **(T-2).**

6.13.6.8. **Special Subjects.** Discuss training rules, WX abort procedures, aircraft emergencies, and separation/disengagement considerations **(T-2).**

6.13.6.9. **Low Altitude Air-to-Air Employment.** Discuss level intercepts (horizontal turn radii, preferred aspects, pursuit options), fuel rules of thumb, required turning room, maximum dive angle restrictions, low altitude weapons employment (weapons envelope/rules of thumb, weapons selection, missile pursuit curves, minimum launch altitudes), low altitude intercept (radar capabilities including detection, LOS problems, false targets, and sorting), low-to-high, high-to-low, and co-altitude intercepts (altitude, airspeed, and power considerations, vertical vice offset conversions, conversion aborts, high/low speed targets, use of HUD, and VID procedures against a low/slow speed target with emphasis placed on threat VID procedures IAW AFTTP 3-1.F-16) **(T-2).**

6.13.7. **Flying Training:** The LASDT flying sylabus is OG tailorable. **(T-3).**

6.13.7.1. **LASDT-1 (Dual or Single-Ship w/Chase).** Mission Objectives. Demonstrate proficiency in single-ship maneuvering between 5,000 feet and 1,000 feet AGL.

Introduce LOWAT Category I operations.  Specific Mission Tasks: AHC IAW AFTTP 3-3.F-16, LOWAT Series exercises (level turn exercise, turning room demo, acceleration/deceleration exercise, descent awareness training, CAT III maneuvering, vertical jink turns, orthogonal SAM break, reversals, visual lookout exercise); G-awareness exercise; low level navigation; airspeed control; fuel management; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; and single-ship low altitude tactical intercepts.

6.13.7.2. **LASDT-2 (Dual or Single-Ship w/Chase).**  Mission Objectives.  Demonstrate proficiency in single-ship LOWAT Category I operations.  Specific Mission Tasks: AHC IAW AFTTP 3-3. F-16, LOWAT Series exercises (level turn exercise, turning room demo, acceleration/deceleration exercise, descent awareness training, CAT III maneuvering, vertical jink turns, orthogonal SAM break, reversals, visual lookout exercise) not flown on previous sorties or needing review; G-awareness exercise; low level navigation; airspeed control; fuel management; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; single-ship low altitude tactical intercepts.

6.13.7.3. **LASDT-3 (Two-Ship).**  Mission Objectives.  Demonstrate proficiency in two-ship LOWAT Category I operations.  Specific Mission Tasks: G-awareness exercise; low level navigation; fuel management; LATF; terrain masking/maneuvering techniques for level/rolling/rough terrain; ridge crossings; altitude awareness/control; attack maneuvering; practice KIOs; defensive reactions; weather route abort; two-ship low altitude tactical intercepts and low altitude weapons employment considerations.  Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category I.

6.13.7.4. **LASDT-4 (Two-Ship).**  Mission Objectives.  Introduce LOWAT Category I two-ship maneuvering against a low/slow target.  Specific Mission Tasks: G-awareness exercise, low level navigation, fuel management, LATF, altitude awareness/control, attack maneuvering, practice KIOs, two-ship low altitude tactical intercepts, low altitude weapons employment considerations, and EID/VID procedures against a low/slow target (dissimilar asset required; helicopter, if able) with emphasis placed on threat VID procedures IAW AFTTP 3-1.F-16  This ride is not required for LOWAT Category I, but should be accomplished as part of pre-deployment spin-up training in support of contingency operations or exercises.

6.13.7.5. **LASDT-5 (Dual or Single-Ship w/Chase).**  Mission Objectives.  Introduce single-ship LOWAT Category II operations.  Specific Mission Tasks: Same as LASDT-1 only accomplish in the 300-500 foot environment as the student proficiency increases.

6.13.7.6. **LASDT-6 (Dual or Single-Ship w/Chase).**  Mission Objectives.  Demonstrate proficiency in single-ship LOWAT Category II operations.  Specific Mission Tasks: Same as LASDT-2 in the 300-500 foot environment.

6.13.7.7. **LASDT-7 (Two-Ship).**  Mission Objectives.  Demonstrate proficiency in two-ship maneuvering LOWAT Category II operations.  Specific Mission Tasks: Same as

LASDT-3 in the 300-500 foot environment. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category II.

6.13.7.8. **LASDT-8 (Dual or Single-Ship w/Chase).** Mission Objectives. Introduce single-ship LOWAT Category III operations. Specific Mission Tasks: Same as LASDT-1 only accomplish in the 100-300 foot environment as the student proficiency increases

6.13.7.9. **LASDT-9 (Dual or Single-Ship w/Chase).** Mission Objectives. Demonstrate proficiency in single-ship LOWAT Category III operations. Specific Mission Tasks: Same as LASDT-2 in the 100-300 foot environment.

6.13.7.10. **LASDT-10 (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship LOWAT Category III operations. Specific Mission Tasks: Same as LASDT-3 in the 100-300 foot environment. Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category III.

**6.14. Operational Reconnaissance (OPS Recce).** OPS Reconnaissance is a RAP special capability to support unit DOC requirements or AEF tasking. The minimum requirement for pilot training is academics. Conduct familiarization training in a compatible simulator if resources are available. If excess sorties are available, a familiarization flight (during a RAP mission) is desired to assist training maintenance and intel personnel. Unless directed by the SQ/CC, no dedicated flight training is required. **(T-3).**

**6.15. F-16 Block Differences Training.** To train between all variants of the F-16, pilots must be current and qualified prior to beginning training. Using AFI11-202V1 definitions, CCIP aircraft conversion requires differences training only; out-of-cycle checkrides are not required. **(T-3).**

6.15.1. **Academics.** Academic instruction will be tailored to the pilot's previous experience and will concentrate on the differences between the two blocks. Instruction will address avionics system, electrical systems, engine differences (as applicable), flight control system differences (as applicable), aircraft handling characteristics (including departure susceptiblity), EPs, OBOGS normal and emergency operation (if transitioning from a LOX equipped A/C), both A/A and A/G radar modes, and cockpit layouts. If available, an AETC formal course (such as Blk 50 course) meets the requirements for academics and device training. **(T-3).**

6.15.2. **Device Training.** Pilots will receive simulator training as required by previous experience. This simulator will include systems EPs, practice instrument procedures, review of radar and intercept procedures, review of air-to-ground systems, and CAPs. Pilots assigned/attached to units without concurrent simulators will substitute two SEPTs for the simulator **(T-3).**

6.15.3. **Flying Training.** Block differences training may be conducted during MQT. Pilots who do not require MQT will receive one supervised aircraft sortie. Flight briefing will stress cockpit procedures and employment techniques. **(T-3).**

**6.16. Contingency/Exercise Spin-Up Training.** This training will be conducted prior to support of contingency operations (if time permits) or exercises **(T-2).** The objective of this training is to ensure the pilot's ability to conduct all missions in support of expected tasking. For contingency operations, units are responsible for contacting appropriate gaining

command/operations to determine expected mission taskings.  For exercises, units are responsible for referring to appropriate EXPLANS and contacting appropriate exercise POCs prior to deployment to determine expected mission taskings.  These EXPLANS include COMACC EXPLAN 80 for Red, Maple, and Coalition Flags, EXPLAN 323 for Green Flag - West, and EXPLAN 163 for Green Flag - East. This assures the units are prepared for the appropriate tasking and allows the responding OG/CC to tailor this training for the theater, threat, and tactics for the assigned task.  The SQ/CC is then responsible for implementation of this spin-up, prosecuting the required missions, and determining the specific requirements necessary to reach the desired level of proficiency.  Emphasis will be placed on training needed for missions not accomplished in daily operations.  **(T-3).**

6.16.1.  If a pilot is not assigned to the tasked squadron, they must receive spin-up training as determined by the tasked SQ/CC **(T-3).** This applies to all attached pilots (OG/WG/HQ staffs, etc.), and all pilots augmenting from other squadrons (operational, FTU, weapons school, test, etc.).  The objective of this training is to ensure attached/augmenting pilot is proficient to conduct all missions in support of expected tasking.  The deploying SQ/CC will determine the amount of spin-up training required for each attached/augmenting pilot based on the pilot's level of proficiency, currency, qualification, experience, etc.  For augmenting pilots, once the amount of spin-up training is determined, the augmentee's SQ/CC is responsible for ensuring the spin-up training is accomplished **(T-3).**

6.16.2.  **Ground Training.**  All applicable pilots will complete ground training as necessary prior to their support of contingency operations or exercises **(T-2).**

6.16.2.1.  **Academics.**  Units will brief exercise SPINS, ROE/Training Rules, command and control, engagement authority and procedures, and visual identification **(T-2).** MAJCOM/A2 will assist the unit's intelligence functions in the development of threat assessments and visual recognition training materials.

6.16.2.2.  **Visual Recognition.** Pilots must be able to visually identify aircraft (rotary and fixed-wing, including joint/allied assets) they are likely to encounter by name or numerical designator and determine whether the aircraft is a threat or non-threat (training should incorporate all aspects/angles, theater-specific paint schemes/fin flashes, and various configurations), identify ground equipment, and determine major categories of naval vessels **(T-2).**

6.16.3.  **Flying Training.** Tailor spin-up training to ensure all supporting pilots are proficient, current, and qualified in all expected mission taskings **(T-2).**



TOD D. WOLTERS, Lt Gen, USAF
Deputy Chief of Staff for Operations

**Attachment 1**

**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION**

*References*

AFI 10-245, *Antiterrorism (AT)*, 21 Sep 12

AFI 10-704, *Military Deception Program,* 30 Aug 05

AFPD 11-2, *Aircrew Operations,* 19 Jan 12

AFPD 11-4, *Aviation Service,* 01 Sep 04

AFI 11-2F-16V2, *F-16--Aircrew Evaluation Criteria,* 10 Dec 09

AFI 11-2F-16V3, *F-16--Operations Procedures,* 18 Dec 13

AFI 11-202V1, *Aircrew Training,* 22 Nov 10

AFI 11-202V2, *Aircrew Standardization/Evaluation Program,* 13 Sep 10

AFI 11-202V3, *General Flight Rules,* 22 Oct 10

AFI 11-207, *Combat Aircraft Delivery,* 24 Oct 07

AFMAN 11-210, *Instrument Refresher Program (IRP),* 3 Feb 05

AFI 11-214, *Air Operations Rules and Procedures,* 14 Aug 12

AFMAN 11-217V1, *Instrument Flight Procedures,* 22 Oct 10

AFI 11-218, *Aircraft Operations and Movement on the Ground,* 28 Oct 11

AFI 11-290, *Cockpit/Crew Resource Management Program,* 15 Oct 12

AFI 11-301V1, Aircrew Flight Equipment (AFE) Program, 25 Feb 09

AFPD 11-4, *Aviation Service,* 1 Sep 04

AFI 11-401, *Aviation Management,* 10 Dec 10

AFI 11-402, *Aviation and Parachutist Service, Aeronautical Ratings and Badges,* 13 Dec 10

AFI 11-403, *Aerospace Physiological Training Program,* 30 Nov 12

AFI 11-404, *Centrifuge Training for High-G Aircrew,* 28 Oct 05

AFI 13-212, *Range Planning and Operations,* 16 Nov 07

AFI 14-202V1, *Intelligence Training,* 10 Mar 08

AFI 14-2F-16V1, F-16 *Unit Intelligence Training,* 02 Jun 08

AFI 16-1301, *Survival, Evasion, Resistance, and Escape (SERE) Program,* 6 Sep 06

AFI 16-402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting and Termination,* 13 May 13

AFI 36-2201, Air Force Training Program*, 15 Sep 10*

AFI 36-2226, *Combat Arms Program*, 24 Feb 2009

AFI 36-2644, *Self-Aid and Buddy Care Training,* 2 Apr 12

AFMAN 33-363, *Management of Records*, 1 March 2008

AFI 51-401, *Training and Reporting to Ensure Compliance with the Law of Armed Conflict,* 11 Aug 11

AFI 71-101V1, *Criminal Investigations Program,* 8 Apr 11

AFI 71-101V2, *Protective Service Matters,* 17 May 11

AFI 71-101V4*, Counterintelligence,* 8 Nov 11

AFI 91-202, *The US Air Force Mishap Prevention Program,* 5 Aug 11

AFTTP 3-1 Volume 1, *General Planning* Change 1, *Tactical Employment*, 2 Feb 12

AFTTP 3-1.F-16-Change 1, *Mission Employment F-16,* 14 June 13

AFTTP 3-3.F-16-Change 1, *Combat Aircraft Fundamentals--F-16,* 14 Jun 13

DoDI 7730.57, *Aviation Incentive Pays and Continuation Bonus Program*, 12 Aug 2008

JP 3 -60, *Joint targeting,* 31 Jan 13

**Adopted Forms**

AF Form 847, *Recommendation for Change of Publication*

AF Form 8, *Certificate of Aircrew Qualification*

**Abbreviations and Acronyms**

**A/A**—Air-to-Air

**A/S**—Air-to-Surface

**AAGS**—Army Air-to-Ground System

**AAR**—Air-to-Air Refueling

**AAMD**—All Aspect Missile Defense

**AB**—Afterburner

**ACA**—Airspace Control Alert

**ACBT**—(Dissimilar) Air Combat Training

**ACC**—AirCombat Command

**ACDE**—Aircrew Defense Ensemble

**ACDT**—Aircrew Defense Training

**(D)ACM**—(Dissimilar) Air Combat Maneuvering

**ACMI**—Air Combat Maneuvering Instrumentation

**(D)ACT**—(Dissimilar) Air Combat Tactics

**ADL**—Aircraft Data Link

**AEF**—Aerospace Expeditionary Force

**AF**—Air Force

**AFRC**—Air Force Reserve Command

**AFSC**—Air Force Specialty Code

**AGL**—Above Ground Level

**AGM**—Air-to-Ground Missile

**AGSM**—Anti-G Straining Maneuver

**AHC**—Aircraft Handling Characteristics

**AI**—Air Intercept, Air Interdiction

**ALIC**—Aircraft Launcher Interface Computer (alt: Avionics/Launcher Interface Computer)

**ANG**—Air National Guard

**AOA**—Angle of Attack

**AOC**—Air Operations Center

**AOS**—Air Operations Squadron

**API**—Aircrew Position Indicator

**ARC**—Air Reserve Components (includes ANG and AFRC)

**ARMS**—Aircrew Resource Management System

**ASC**—Air Strike Control

**ATP**—Advanced Targeting Pod (Litening and SNIPER)

**AVTR**—Aircraft Video Tape Recorder

**AWACS**—Airborne Warning and Control System

**BAQ**—Basic Aircraft Qualification

**BDA**—Battle Damage Assessment

**(D)BFM**—(Dissimilar) Basic Fighter Maneuvers/Maneuvering

**BMC**—Basic Mission Capable

**BSA**—Basic Surface Attack

**BSA-N**—Basic Surface Attack Night

**BVR**—Beyond Visual Range

**C3**—Command, Control, and Communications

**C3I**—Command, Control, Communications, and Intelligence

**CAF**—Combat Air Forces

**CAP**—Combat Air Patrol, Critical Action Procedures

**CAS**—Close Air Support

**CAT**—Category

**CA-Coded**—Designated Aggressor Aircraft

**CB-Coded**—Designated Test Aircraft

**CC**—Commander

**CC-Coded**—Designated Combat Aircraft

**CCIP**—Constantly Computed Impact Point

**CCRP**—Continuously Computed Release Point

**CE**—Combat Edge, Circular Error

**CFT**—Cockpit Familiarization Trainer

**CFTR**—Composite Force Training

**CHUM**—Chart Update Manual

**CMR**—Combat Mission Ready

**COCOM**—Combatant Commander

**COMM JAM**—Communications Jamming

**COMSEC**—Communications Security

**COT**—Continuous Overseas Tour

**COTS**—Commercial Off The Shelf

**CPT**—Cockpit Procedures Trainer

**CRM**—Cockpit Resource Management

**CRT**—Cathode Ray Tube

**CSAR**—Combat Search and Rescue

**CT**—Continuation Training

**CV**—Vice Commander

**DB**—Dive Bomb

**DCA**—Defensive Counter Air

**DCA-N**—Defensive Counter Air Night

**DEAD**—Destruction of Enemy Air Defenses

**DNIF**—Duty Not Involving Flying

**DOC**—Designed Operational Capability

**DR**—Dead Reckoning

**DRU**—Direct Reporting Unit

**DT**—Dynamic Targeting

**EA**—Electronic Attack

**EC**—Electronic Combat

**ECCM**—Electronic Counter Countermeasures

**ECM**—Electronic Countermeasures

**ECR**—Electronic Combat Range

**EEI**—Essential Elements of Information

**EO**—Electro-Optical

**EP**—Emergency Procedure, Electronic Protection

**EPE**—Emergency Procedures Evaluation

**ETCA**—Education and Training Course Announcements

**EW**—Electronic Warfare

**EXP**—Experienced

**FAC**—Forward Air Controller

**FAC(A)**—Forward Air Controller (Airborne)

**FAM**—Familiarization

**FCP**—Front Cockpit

**FE**—Flight Examiner

**FEB**—Flying Evaluation Board

**FEF**—Flying Evaluation Folder

**FHP**—Flying Hour Program

**FL**—Flight Lead

**FLIR**—Forward Looking Infrared

**FLUG**—Flight Lead Upgrade

**FMT**—Full Mission Trainer

**FOT&E**—Follow-on OT&E

**FOV**—Field of View

**FP**—First Pilot

**FPM**—Flight Path Marker

**FS**—Fighter Squadron, Flight Surgeon

**FSCL**—Fire Support Coordination Line

**FSWD**—Full Scale Weapons Delivery

**FTR**—Fighter

**FTU**—Formal Training Unit

**FW**—Fighter Wing

**G**—Gravitational Load Factor

**GBU**—Guided Bomb Unit

**GCI**—Ground Controlled Intercept

**GLO**—Ground Liaison Officer

**GLOC**—G-induced Loss of Consciousness

**GP**—General Purpose

**HADB**—High Altitude Dive Bomb

**HARB**—High Altitude Release Bomb

**HARM**—High-Speed Antiradiation Missile (AGM-88)

**HAS**—High Angle Strafe, HARM As Sensor

**HATR**—High Angle Tactical Rocket

**HHQ**—Higher Headquarters

**HTS**—HARM Targeting System (HTSP-pod)

**HUD**—Head Up Display

**HVAA**—High Value Airborne Asset

**IAM**—Inertial Aided Munition

**IAW**—In Accordance With

**ID**—Identify/Identification

**IFE**—In Flight Emergency

**IFF**—Identification Friend or Foe

**IFR**—Instrument Flight Rules

**IMC**—Instrument Meteorological Conditions

**INEXP**—Inexperienced

**INFLTREP**—In-flight Report

**INS**—Inertial Navigation System

**IOC**—Initial Operational Capability

**IOS**—Instructor Operator Station

**IP**—Instructor Pilot, Initial Point

**IPSIM**—IP Simulator

**IPUG**—Instructor Pilot Upgrade

**IQT**—Initial Qualification Training

**IR**—Infrared

**IRC**—Instrument Refresher Course

**IRCM**—Infrared Counter Measures

**IRMD**—Infrared Missile Defense

**JAAT**—Joint Air Attack Team

**JFT**—Joint Force Training

**JHMCS**—Joint Helmet Mounted Cueing System

**JMO (A)**—Joint Maritime Operations (Air)

**JMPS**—Joint Mission Planning Software

**J-SEAD**—Joint Suppression of Enemy Air Defenses

**JTAC**—Joint Terminal Attack Controller

**KCAS**—Knots Calibrated Airspeed

**KIAS**—Knots Indicated Airspeed

**KIO**—Knock It Off

**KTAS**—Knots True Airspeed

**LAD**—Low Altitude Delivery

**LAHD**—Low Angle High Drag

**LAI**—Low Altitude Intercept

**LALD**—Low Angle Low Drag

**LANTIRN**—Low Altitude Navigation and Targeting Infrared for Night

**LAO**—Local Area Orientation

**LASDT**—Low Altitude Step-Down Training

**LAT**—Low Altitude Toss

**LATF**—Low Altitude Tactical Formation

**LATN**—Low Altitude Tactical Navigation

**LATR**—Low Angle Tactical Rocket

**LGB**—Laser Guided Bomb

**LOS**—Line of Sight

**LOW A/A**—Low Altitude Air-to-Air

**LOW ALT**—Low Altitude

**LOWAT**—Low Altitude Training

**MAD**—Medium Altitude Delivery

**MAJCOM**—Major Command

**MAV**—Maverick

**MCC**—Mission Commander

**MDS**—Mission Design Series

**MIL**—Military Power

**MISREP**—Mission Report

**MOA**—Military Operating Area, Memorandum of Agreement

**MOUT**—Military Operations in Urban Terrain

**MP**—Mission Pilot

**MQF**—Master Question File

**MQT**—Mission Qualification Training

**MSA**—Minimum Safe Altitude

**MSN**—Mission

**MTC**—Mission Training Center

**MTT**—Mutli Tactics Trainer

**N/A**—Not Applicable

**NAAR**—Night Air Refueling

**NAF**—Numbered Air Force

**NAV**—Navigation

**NGB**—National Guard Bureau

**NLT**—Not Later Than

**NT**—Night

**NTC-L**—Networked Training Center-Luke

**NVG**—Night Vision Goggles

**OCA**—Offensive Counterair

**OCA-A**—Offensive Counterair Air-to-Air

**OCA**—S—Offensive Counterair Air-to-Surface

**OG**—Operations Group

**OPR**—Office of Primary Responsibility

**OPS**—Operations

**OPSEC**—Operations Security

**OSC**—On Scene Commander

**OT&E**—Operational Test and Evaluation

**PAI**—Primary Aircraft Inventory

**PAR**—Precision Approach Radar

**PCS**—Permanent Change of Station

**PDAI**—Primary Development/Test Aircraft Inventory

**PFT**—Programmed Flying Training

**PGM**—Precision Guided Munitions

**PMAI**—Primary Mission Aircraft Inventory (Includes aircraft assigned to Aggressor units)

**PTAI**—Primary Training Aircraft Inventory

**PTT**—Partial Task Trainer

**PW**—Paveway

**QUAL**—Qualification

**RAP**—Ready Aircrew Program

**RCO**—Range Control Officer

**RCP**—Rear Cockpit

**RCS**—Radar Cross Section

**RECCE**—Reconnaissance

**RF**—Radio Frequency

**RFMDS**—Red Flag Mission Debriefing System

**RMD**—Radar Missile Defense

**ROE**—Rules of Engagement (Combat only)

**RTM**—RAP Tasking Memorandum

**RWR**—Radar Warning Receiver

**SA**—Situational Awareness

**SADL**—Situational Awareness Data Link

**SAR**—Search and Rescue

**SAT**—Surface Attack Tactics

**SCL**—Standard Conventional Load

**SEAD**—Suppression of Enemy Air Defenses

**SELO**—Stan/Eval Liaison Officer

**SEPT**—Situational Emergency Procedure Training

**SFO**—Simulated Flameout

**SI**—Simulator Instructor

**SIM**—Simulator (MTC, WST, UTD, MTT, WTT)

**SLD**—Systems Level Delivery

**SOF**—Supervisor of Flying, Special Operations Forces

**SORTS**—Status of Resources and Training System

**SORTIE**—In Air Operations, An Operational Flight By One Aircraft

**SQ/CC**—Squadron Commander

**TAC**—Tactical

**TACAN**—Tactical Air Navigation

**TACS**—Theater Air Control System

**TAI**—Total Active Inventory

**TD**—Tactical Deception (AFI 10-704)

**TDY**—Temporary Duty

**TES**—Tactics Eval Sq/Test &Evaluation Squadron

**TF-Coded**—Designated Training Aircraft

**TFI**—Total Force Integration

**TGM**—Training Guided Munitions

**TGP**—LANTIRN, LITENING II or SNIPER Targeting Pod

**TGT**—Target

**TI**—Tactical Intercept

**T.O.**—Technical Order

**TOD**—Time of Day

**TOT**—Time Over Target

**TR**—Training Rules

**TST**—Time Sensitive Target

**TTP**—Tactics, Techniques and Procedures

**TTR**—Tactics and Training Range

**TX**—Transition

**UCML**—Unit Committed Munitions List

**UE**—Unit Equipped

**UIP**—Upgrading Instructor Pilot

**UMD**—Unit Manning Document

**USAF**—United States Air Force

**USAFE**—United States Air Forces in Europe

**USAFWS**—United States Air Force Weapons School

**USI**—Upgrading Simulator Instructor

**UTE**—Utilization Rate

**UTD**—Unit Training Device

**VID**—Visual Identification

**VFR**—Visual Flight Rules

**VLD**—Visual Level Delivery

**VMC**—Visual Meteorological Conditions

**VTR**—Video Tape Recorder

**WD**—Weapons Delivery

**WDL**—Weapon Data Link

**WG**—Wing

**WIC**—Weapons Instructor Course

**WS**—Weapons School

**WST**—Weapon System Trainer

**WTT**—Weapons and Tactics Trainer

**WVR**—Within Visual Range

**WX**—Weather

**XR**—Extended Range (refers to Sniper XR ATP)

*Terms*

**Air Combat Training (ACBT)**—A general term which may include (D)BFM, (D)ACM, and (D)ACT.  Accomplishment of this event requires visual manuevering against an airborne adversary.  Maneuvering categories (IAW AFI11-214) are not a litmus test for the accomplishment of ACBT.  The prefix (D) refers to dissimilar assets.  When the prefix is missing, similar is assumed as flown/required.  When present in parenthesis, dissimilar is optional.  When present without parenthesis, dissimilar is assumed flown or required.  This convention corresponds to all facets of ACBT (i.e., BFM, ACM, ACT).

**Air Combat Tactics (ACT)**—Training in the application of offensive and defensive maneuvering to achieve a tactical air-to-air objective.  DCA, OCA, Force Protection and other A-A centric missions that include element/multi-ship blue tactics are examples of ACT. Maneuvering categories (IAW AFI11-214) are not a litmus test for the accomplishment of ACT.

**Basic Mission Capable (BMC)**—The status of an pilot who has satisfactorily completed training (MQT) prescribed to be fully qualified to perform the basic unit operational missions but does not maintain CMR status.  Pilot accomplishes training required  to remain familiarized in all, and may be qualified and proficient in some, of the primary missions of their weapon system and unit. These pilots may also maintain special capabilities (refer to paragraph **4.3**).

**Basic Aircraft Qualification (BAQ)**—A status of a pilot who has satisfactorily completed training prescribed to maintain the skills necessary to fly the unit aircraft.  The member must perform at the minimum frequency necessary to meet the most recent sortie and flight standards set for the weapons system. BAQ will only be carried by pilot until completion of MQT.  BAQ is not a permanent qualification except for General Officers above the wing level, and any other crew members specifically authorized by MAJCOM/A3.  Pilots are not authorized to perform RAP-tasked missions/events without instructor pilot or SQ supervisor supervision.  Flight duties will be limited to those identified in paragraph **4.3**

**Certification**—The process of certifying pilot tactical employment and special weapons capabilities, procedures, and rules. Replaces verification for nuclear tasked units.

**Circular Error (CE)**—Miss distance of a given weapon impact expressed in radial distance from center of target.

**Cockpit Familiarization Trainer (CFT)**—A training device in which the controls, switches, and instruments do not have to respond to trainee inputs. Used for checklist use, normal procedures, and emergency procedures.

**Cockpit Procedures Trainer (CPT)**—A training device in which instruments and displays are activated to respond to trainee inputs.  Used  for safety of flight, instrument, normal, and emergency procedures.

**Combat Edge (CE)**—A positive-pressure breathing-for-G (PPG) system which provides pilots additional protection against high positive G accelerations experienced during flight. The system consists of pilot equipment (high-pressure mask, counter-pressure suit (optional with the CRU-94 Port Plug installed), G-suit), and aircraft equipment (oxygen regulator, G-valve, and interfacing sense line). Above 4G regulated air and oxygen are supplied to the system to provide automatic mask tensioning, vest inflation (n/a with port plug installed), and positive pressure breathing to the mask.

**Combat Mission Ready (CMR)**—A status of a pilot who has satisfactorily completed training (MQT) prescribed to be fully qualified to perform the basic unit operational missions, and maintains qualification and proficiency in these missions.  All RegAF API-1/2's, Squadron Commander, Operations Officers, and OG/CC designated API-6 manning positions are required to maintain this qualification level.  Exception: If a unit is over-manned, they may elect to train the front line of their UMD to CMR with the overage designated as BMC.  Approximately 50% of the pilots selected for CMR must be inexperienced (refer to paragraph **4.3**).

**Composite Force Training (CFTR)**—Scenarios employing multiple flights of the same or different types of aircraft, each under the direction of its own flight leader, performing the same or different roles.

**Continuation Training (CT)**—Training to maintain proficiency and improve pilot capabilities to perform unit missions (does not include formal syllabus or test plan missions). Applicable to CMR and BMC pilots.

**Currency**—The minimum frequency required to perform a mission, sortie, or an event safely.

**Delivery Parameters**—Data reflecting current delivery considerations for general purpose ordnance as well as tactical survivability. Appropriate aircraft/ weapons Tech Orders must be consulted for live ordnance safe escape criteria and -1 performance charts for recovery altitudes.

**Emergency Procedures Evaluation (EPE)**—An evaluation of pilot knowledge and responsiveness to critical and non-critical EPs conducted by an FE in an OFT, CPT, CFT, MTT, UTD, or aircraft cockpit.

**Experienced Aircrew (EXP)**—See paragraph **1.5.5**

**Flight Lead (FL)**—As designated on flight orders, the individual responsible for overall conduct of mission from preflight preparation/briefing to postflight debriefing, regardless of actual position within the formation. A certified 4-ship FL may lead formations and missions in excess of four aircraft, unless restricted by the unit CC. A 2-ship FL is authorized to lead an element in a larger formation.

**Full Mission Trainer (FMT)**—A training device which dynamically simulates flight characteristics. Used for normal, emergency, and instrument procedures, to include safety of flight, warfighting tasks, and skill integration training.

**Full Scale Weapons Delivery (FSWD)**—Delivery of live or inert ordnance representing a typical combat configuration/SCL of Unguided Munitions in a tactical scenario.

**Helmet Mounted Display (HMD)**—General term that references all F-16 helmet mounted displays including the JHMCS and HMIT.

**Helmet Mounted Integrated Targeting (HMIT)**—A type of HMD also referred to as the Scorpion that utilizes a modified HGU-55P helmet.  A modified banana bar mounted to the HGU-55P holds a transparent display paddle that presents color Heads-Up information to the pilot during day or night operations.

**Initial Qualification Training (IQT)**—Training to initially qualify the pilot in basic aircraft flying duties without specific regard to a unit operational mission.  The minimum training requirement for Basic Aircraft Qualification (BAQ).

**Joint Force Training (JFT)**—Scenarios employing integrated aerospace and land/naval forces. Examples include JAAT, CAS with FAC, airdrop escort, etc.

**Joint Helmet-Mounted Cueing System (JHMCS)**—An advanced visor and helmet system that can display Heads-Up Display information on the inside of the pilot's visor.

**Limited-Threat VID**—Visual identification of a bogey in a limited threat environment (i.e., counter-drug operations, NORAD procedures, etc.) IAW AFTTP 3-1.

**Litening TGP (II, ER, AT)**—Second generation targeting pod with unique built in capabilities such as laser marker, charge couple device (day use camera), laser spot search and track mode and lase ability above 25,000 feet MSL.

**Low Altitude Navigation and Targeting Infrared for Night (LANTIRN)**—A navigation and targeting system that provides tactical aircraft with a low-altitude, under-the-weather, day and night operational capability.

**Low Altitude Training (LOWAT)**—Operations in a certified low altitude block as defined in Table 6.1. Currency associated with and updated by either LOW A/A or LOW A/G.

**Low Altitude Tactical Formation (LATF)**—Flying tactical formation while conducting LATN training.

**Low Altitude Tactical Navigation (LATN)**—Training conducted below 1,000 feet AGL using onboard systems and the fundamental aspects of dead reckoning and point-to-point low altitude navigation, with or without prior route planning.

**Low Altitude Intercept (LAI)**—An intercept conducted below 5,000 feet AGL.

**Medium Altitude Tactics**—Day or night (if appropriate for night mission profiles) tactical formation above 5,000 feet AGL, ingressing to a target area, employing actual or simulated ordnance, and egressing with mutual support.

**Mission Qualification Training (MQT)**—Training required to achieve a basic level of competence in unit's primary tasked missions. This training is a prerequisite for CMR or BMC status.

**Mission Training Center (MTC)**—An installation of high-fidelity networked simulators providing 360-degree visual capabilities coupled with realistic brief and debriefing tools. The facility will have the capability to network local simulator cockpits together, and the potential for long-distance networked operations, providing realistic multi-aircraft virtual training.

**Night Sortie**—Sortie on which either takeoff or landing and at least 50 percent of flight duration or 1 hour, whichever is less, occur between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, coverted to local time. Once trained and equipped, all night sorties should include the use of NVGs. All NVG aided missions should include covert/lights out training.

**Primary Aircraft Inventory (PAI)**—Aircraft authorized for performance of the operational mission. The PAI forms the basis for allocation of operating resources to include manpower, support equipment, and flying-hour funds. The operating command determines the PAI required to meet their assigned missions. (See AFI 16-402.)

**Proficiency**—Demonstrated ability to successfully accomplish tasked event safely and effectively. For purposes of this instruction, proficiency also requires currency in the event.

**SCAR**—Mission flown to control, as a minimum, two independent attacks by fighters on or off range with actual or simulated ordnance against lucrative targets identified and validated in specified geographic locations. Mission elements include: Target area reconnaissance and target identification, C3I network interface, SCAR-to-fighter brief, target marking and fighter hand-off, neutralization of enemy air defenses, BDA, and INFLTREP. Formerly called Killer Scout.

**SEAD**—A tactical event employing simulated or actual munitions to supress any portion of a simulated IADS, to include SAMs, AAA, and GCI systems.

**Situational Emergency Procedures Training (SEPT)**—A discussion and review of abnormal/ emergency procedures and aircraft systems operations/limitations based on realistic scenarios.

**Sniper XR TGP**—Second generation targeting pod with unique built in capabilities such as laser marker, charge couple device (day use camera), laser spot search and track mode and lase ability above 25,000 feet MSL.

**Specialized Training**—Training in specialized tactics, weapons systems, or flight responsibilities such as FL, IP, LASDT, etc. This training may be conducted in MQT or CT, as required.

**Squadron Supervisor**—SQ/CC, SQ/DO, SQ/ADO, and Flight CCs.  ARC: As designated by the OG/CC.

**Tactical Deception (TD)**—Any activity designed to mislead the enemy operational commander by manipulating, distorting, or falsifying evidence, thereby inducing the enemy to act in a manner favorable to our interests or desires (see AFI 10-704).

**Tactical Intercept**—A single/multi-ship intercept performed to accomplish the tactical objective (ID or kill the threat) in a realistic threat scenario. Fighter should counter threat maneuvers and weapons engagement zones, consider environmental factors, attain end game turning room and energy, practice ID/ROE procedures, take valid shots if presented, and terminate when briefed objectives or training rule stops are reached. One event may be logged per engagement.

**Tactics and Training Range (TTR)**—Sites capable of bomb scoring , electronic combat events, and special training.

**Target Mark**—A tactical weapon delivery used in conjunction with final air strike control.

**Threat VID**—Visual identification of a bogey in a threat environment IAW AFTTP 3-1.

**Time Sensitive Target (TST)**—An unplanned (as defined in JP 3-60, Joint Targeting) target requiring immediate response. Targets should be both mobile and fixed.  The attacking aircraft should receive target data/description and "tasking" from an appropriate command and control (C2) asset.  Use of CRCS, AWACS, JSTARS, AOC, UAV, TACP, FAC or a simulation thereof is required.  Scenarios should include standard fire support control measures utilizing standard J-fire terminology for clearance of fires in a dynamic environment.  Data/description can be via datalink or normal radio communications.  Although the target is unplanned, Positive Target Identification (PID), Collateral Damage Estimates (CDE), Deconfliction and basic attack procedures must be thoroughly briefed.

**Unit Training Device (UTD)**—A squadron-level trainer designed for pilot refresher and continuation training for emergency and instrument procedures and air-to-air and air-to-ground weapons employment.  Major components include a high-fidelity cockpit replica for pilot interactions, an out-the-window visual scene, and an Instructor Operator Station (IOS).

**Verification**—Applies to procedure aimed at verifying and refreshing pilot tactical employment knowledge, emphasizing conventional operations and mobile targets. Verification is conducted in both initial and follow-on phases.  Initial verification phase is a formal board proceeding convened to verify individual pilot knowledge. Continuation training is to reinforce, refresh, and update pilots on unit wartime mission/tasking, tactics, and procedures.

**Visual Identification (VID)**—Often required to positively identify an aircraft using visual means.

**Weapons Delivery**—Simulated or actual expenditure of weapons in a tactical scenario.

**Weapons and Tactics Trainer**—A PTT device used primarily for warfighting tasks, and skill integration training.

**Attachment 2**

**GLOSSARY OF MISSION/SORTIE AND EVENT DEFINITIONS**

**A2.1. Mission/Sortie/Event Definitions:**

A2.1.1. **4-Ship Flight Lead (4FL) Mission.** Special capability mission. Mission where FL led a flight of four or more. May be logged in conjunction with baseline training requirements

A2.1.2. **4-Ship A-A Employment Event.** Offensive or defensive A-A employment as a 4-ship minimum against at least one red air. May include (but is not limited to): opposed 4-ship SAT, DCA (4vX), OCA-A(4vX), Force Protection, etc.

A2.1.3. **ACMI Event.** An event which utilizes an ACMI range/facilities for flight and debrief (to include ACTS, RFMDS, PCDS and P4/5RC, etc.). Only one event may be logged per mission.

A2.1.4. **Air Combat Maneuvers (ACM) Mission.** ACM training is designed to achieve proficiency in element formation maneuvering and the coordinated application of BFM to achieve a simulated kill or effectively defend against one or more aircraft from a pre-planned starting position.

A2.1.5. **Air Strike Control (ASC) Event.** A control performed by the FAC(A) passing attack (9-line) information and performing Type 1, 2, or 3 control duties. Two controls are required to update an ASC event. The controls do not have to occur on the same mission. A control consists of at least one aircraft attacking a surface target. The control begins with a CAS briefing from a FAC(A) and ends with either an actual/simulated weapons release or an abort on a final attack run. No more than two controls can be counted per CAS briefing per target. Air strike control (ASC) events only apply to FAC(A) qualified pilots and are IAW current JCAS FAC(A) MOA. Track each ASC performed by type as applicable (see definition below) for JCAS FAC(A) MOA documentation requirements. Only applies to FAC(A) qualified pilots when performed as the FAC(A). FAC(A)s will satisfy their requirements with ground units or TACPs whenever possible.

A2.1.6. **Aircraft Handling Characteristics (AHC) Mission (ANG: Event).** Basic skills mission. Training for proficiency in utilization and exploitation of the aircraft flight envelope, consistent with operational and safety constraints, including, but not limited to high/maximum AOA maneuvering, energy management, minimum time turns, maximum/optimum acceleration and deceleration techniques, and confidence maneuvers.

A2.1.7. **Air-to-Air Refueling (AAR) Event.** An AAR event requires tanker rendezvous, hook-up and transfer of fuel or 2 minutes of dry contact. More than one event may be credited if receivers accomplish another rendezvous, hook-up and fuel transfer/dry hook-up.

A2.1.8. **Alert Scramble Event.** From an alert posture, launch on a scramble order in any tasked role. Simulated event may terminate after initial taxi. Only one event may be logged per sortie.

A2.1.9. **Attrition Sortie.** Programming tool used to forecast future flight hour and sortie requirements. Attrition sorties are derived from historical data (weather, sympathetic,

maintenance, etc.) and used to account for sorties cancelled before flight. Sorties cannot be considered attrition (see Non-effective Sortie definition).

A2.1.10. **Basic Fighter Maneuvers (BFM) Mission.** Building block mission. BFM (1 v 1) Training designed to apply aircraft handling skills to gain proficiency in recognizing and solving range, closure, aspect, angle off, and turning room problems in relation to another aircraft to either attain a position from which weapons may be launched, or defeat weapons employed by an adversary.

A2.1.11. **Basic Surface Attack (Night) [BSA-(N)] Mission.** Building block mission. Training designed to achieve proficiency in medium/low altitude tactical navigation and air-to-surface weapons delivery events.  Excess night missions may be applied to day requirements.  All night missions should include the use of NVGs.  All NVG aided missions should include covert/lights out training.

A2.1.12. **Chaff Event.** Inflight dispensing of chaff during a tactical mission profile in response to an actual or simulated threat. Event requires actual release and is limited to logging of one event per engagement.

A2.1.13. **Close Air Support (CAS) Mission.** Mission flown in support of ground forces (actual or simulated) under the control of a Forward Air Controller-Airborne (FAC-A) or JTAC providing air strike control for the fighter attacks.  Mission elements include:  Intel scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons employment against designated targets while under positive control of a FAC(A) or JTAC interfacing (actual or simulated) with the TACS/AAGS C2 network, and INFLTREP.  Excess night missions may be applied to day requirements.  All night missions should include the use of NVGs.  All NVG aided missions should include covert/lights out training.  **CAS in Urban Terrain.**  Training in urban environments emphasizes target identification, attack axis limitations, and avoiding collateral damage, in close proximity to and coordination with friendly forces.  One event, culminating in actual or simulated weapons release, may be logged per target.  Both LAS and HAS plus LGB are desired.

A2.1.14. **Collateral Sortie.**  Sortie not directly related to combat employment or basic skills training but necessary for accomplishment of unit training programs, such as ferry flights, deployments, incentive flights, hurrevac, airshows, etc.  (see paragraph **1.7.3**).  Tactical events accomplished on collateral sorties may be logged and used to update currencies but may not be logged as RAP missions or count towards RAP lookback requirements.

A2.1.15. **Commander Option/AEF Prep Mission.** Mission allocated at the beginning of each training cycle by the unit commander based on DOC requirements or AEF commitments.  Allocate for CMR pilots to meet individual training requirements and unit training objectives.  Allocate for BMC pilots to meet the BMC definition and support squadron training requirements.  CMR pilots may log any type RAP mission, with the exception of a Red Air, Instruments, or AHC.

A2.1.16. **Composite Force Training (CFTR) Event.** Scenarios employing multiple flights of aircraft, each under the direction of its own flight leader, acting in a large-force employment (LFE) scenario to achieve a common tactical objective.  Scenarios should be

opposed by air and surface threats and should include at least 8 blue aircraft. Only one event may be logged per mission.

A2.1.17. **Contingency Sortie.** A sortie tasked and flown while deployed for a contingency operation. These sorties are logged as Contingency Operations Sortie in ARMS. These sorties and events accomplished on these sorties do not count towards training cycle RAP requirements, however, the sorties may be used for lookback and the events may be used to update currencies.

A2.1.18. **Defensive Counter Air (Night) [DCA (N)] Mission.** Mission designed to develop proficiency in Defensive Counter Air (DCA) mission tactics. Mission elements include: Intel scenario and mission planning, execution of tactics to detect, engage, and negate aircraft employing adversary tactics and weapons capabilities to penetrate protected airspace or attack a specific target area, and in-flight report. Additional night missions may be applied to day mission requirements. All night missions should include the use of NVGs. All NVG aided missions should include covert/lights out training.

A2.1.19. **Demanding Sortie**--Sorties that task the pilot to the extent that flying frequency and continuity are most critical. Authorized missions/events requiring demanding sortie currency are: BFM (N/A for AGRS SQ), ACM, ACT, LOW A-A or A-G (below 1,000 feet AGL), CAS < 5000 feet AGL (including weapons delivery and recovery), Opposed SAT, CFTR, night missions, instructor duties, aerial demonstrations, etc. SQ/CCs may add missions/events to the demanding sortie list, depending on unit tasking and the individual's capabilities. Also see Non-demanding Sortie.

A2.1.20. **Destruction of Enemy Air Defenses (DEAD) Mission.** Mission designed to develop proficiency in Destruction of Enemy Air Defense tactics. Mission elements include: Intel scenario and integrated mission planning to support force package objectives, execution of tactics to detect and destroy (utilizing conventional, IAM, or LGB munitions) enemy IADS, to include SAM, AAA systems, and critical IADS nodes, employing adversary tactics and weapons capabilities to disrupt force package employment/destroy package assets, and in-flight report. Destructive suppression effects are cumulative, resulting in reduced attrition of friendly aircraft. Destructive operations should be integrated and used with disruptive operations. TGP employment (dual-carriage when capable) is highly desired.

A2.1.21. **DT A/A Event.** Complete an air-to-air intercept/engagement against a target relayed/passed by an appropriate command and control (C2) asset. Track information should be a datalinked (J 3.2 track) if possible, otherwise via normal radio communications (C2 asset and relay/passing of track information can be simulated). Only two events may be logged per mission.

A2.1.22. **DT A/G Event.** Complete an air-to-ground attack/engagement against a target/TST relayed/passed by an appropriate command and control (C2) asset. Track information should be a datalinked (J 3.5 track) if possible, otherwise via normal radio communications (C2 asset and relay/passing of track information can be simulated). Targeting within a CAS scenario does not meet the intent of this event. Only two events may be logged per mission.

A2.1.23. **EA A/A Event.** An intercept performed against a target using active and/or passive EP against attacker's radar, causing the attacker to employ EA techniques or tactics. Does not include co-channel interference.  Only one event may be logged per engagement.

A2.1.24. **Element Air-to-Air Maneuvers Event.** Formerly ACT (2v2) min. Accomplishing an Air-to-air tactical event as Blue Air that requires element deconfliction, contract adherence, and formation maneuvering.  This may include (but is not limited to): ACM (as blue), element notch-attack, WEZ in depth maneuvers to VID, Skate/Banzai tactical execution, etc.  Minimum of 2 in the blue element opposed by multiple groups or single multi-ship group (desired).  A single ship (ADAIR/Red Air) satisfies the intent.

A2.1.25. **EP A/A Event.**  The pilot detects an airborne threat via electronic means and reacts with appropriate maneuvers, pod/internal ECM switchology, and/or expendables. Airborne threat training will be accomplished only with a dedicated adversary attacking from BVR. Only one event may be logged per engagement.

A2.1.26. **EW Range Event.** Inflight operations conducted on an EW range with fixed or mobile surface-to-air emitters operating and detection/threat reaction emphasized. Normally accomplished in conjunction with other EW-type events.  The pilot detects a surface threat via electronic means and reacts with appropriate maneuvers, pod/internal EP switchology and/or expendables.  Missions flown against EW Aggressor or mobile threat emitters placed in a MOA, range, or along a low level route are acceptable. Only one EW range event may be logged per mission (Active EA must be used).

A2.1.27. **Flag Exercise Event.** Missions flown in formal MAJCOM-sponsored exercises (ie. Red Flag, Green Flag, etc.).  Flag events will include operations with Full Scale Inert/Live ordnance (see paragraph **5.6**).

A2.1.28. **Flare Event.** Inflight release of self-protection flares during a tactical mission profile as a threat response. Event requires actual release and is limited to logging of one event per engagement.

A2.1.29. **Forward Air Control (Airborne) [FAC(A)] Mission.** Special capability mission designed to develop proficiency in airborne forward air control of armed attack fighters in support of actual or simulated ground forces, and can be flown as element lead or the supporting wingman (if FAC(A) qualified).  Mission elements include:  intel scenario and mission planning, actual or simulated interface with TACS/AAGS C2 network, target acquisition and identification, FAC-to-fighter brief, target marking, positive control (Type 1, 2, or 3) of ground attack fighters employing simulated or actual ordnance against designated targets, integration of ground and heliborne fire support elements (if available), identification and neutralization of enemy air defenses, BDA, and INFLTREP.  FAC(A) missions may be counted towards CAS or Commander Option mission requirements.  Within a FAC(A) mission are ASC events and currency requirements.

A2.1.30. **HAVE QUICK Event.** The practice of loading the combat or HAVE QUICK training net WOD, best available TOD.  Requires proper radio configuration for HAVE QUICK operation and successful utilization during tactical mission accomplishment and/or effective chattermark procedures.  Limited to logging of one event per sortie.

A2.1.31.  **Instructor Pilot (IP) Mission.**  Special capability mission.  Instructors will log an IP mission when acting in an instructor capacity to update IP currency.  IP missions may be dual-logged with any other RAP mission or special capability missions.

A2.1.32.  **Instrument Mission (ANG: N/A).**  Basic skills mission.  Training designed to ensure instrument proficiency. RAP events may be accomplished on an instrument mission provided accomplishment does not interfere with the primary goal of instrument training. Units are allocated flying hours for every pilot to accomplish their minimum basic skill requirements.  Priority for this type of mission should be strange field approach training. Instrument missions logged in the MTC must have an IP or sim-IP running the IOS and critiquing performance.

A2.1.33.  **Joint Helmet-Mounted Cueing System (JHMCS).** An advanced visor and helmet system that can display Heads-Up Display information on the inside of the pilot's visor.

A2.1.34.  **J-SEAD Mission.**  SEAD mission integrating non-F-16 assets operating in support of the SEAD role.  Assets include, but are not limited to, RC-135 Rivet Joint, EA-6B, EP-3, ECR Tornado, etc.

A2.1.35.  **Low Air-to-Air (LOW A/A) Event.**  An event defined as performing realistic, mission-oriented A/A operations while at or below 1000 feet AGL to the pilot's qualified minimum altitude block (see **Table 6.1**).  The event includes skills necessary to search for, and engage offensively, an aerial target at low altitude with and without ATP.  Only one event may be logged per mission.  Accomplishing this event updates LOWAT currency.

A2.1.36.  **Low Air-to-Ground (LOW A/G) Event.** An event defined as performing realistic, mission-oriented low altitude operations while at or below 1000 feet AGL to the pilot's qualified minimum altitude block (see **Table 6.1**).  The event includes low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks.  Only one event may be logged per mission.  Accomplishing this event updates LOWAT currency.

A2.1.37.  **Low/Slow Speed Threat VID Intercept Event.** Tactical intercept performed to accomplish the tactical objective (ID the bogey, ID and kill the bandit, etc) on a target below 5000 feet AGL with airspeed less than 250 KIAS.  Fighter should counter threat maneuvers and weapons engagement zones, consider environmental factors, attain turning room and energy at end game, practice ID/ROE procedures, and terminate when briefed objectives or training rule stops are reached.  These intercepts will not update ACBT currency.  Two events may be logged per mission, but not on the same engagement.  Units assigned the ACA/ONE mission will accomplish low/slow VID intercepts with TGP/ATP to assist in VID, shadow, and weapons employment.

A2.1.38.  **Moving Target LGB Attack Event.** Self or buddy-lase LGB attack against a target in motion.  Reference AFTTP 3-1 Shot Kill hit criteria.

A2.1.39.  **Moving Target Strafe Event.** Tactical strafe attack against a target in motion. Both HAS and LAS are desired.  Until AFTTP 3–1 hit criteria is available, units will develop simulated ordnance hit/miss criteria using available weapons publications (e.g. Jedi Knight Phase 3 report, TTPs in development, and USAFWS papers).

A2.1.40. **Mission Commander (MCC) Mission.** Special capability mission. Mission where the pilot acted in the capacity of a MCC for a joint/composite mission responsible for two or more types of aircraft with four or more total aircraft, or more than four own MDS aircraft versus a minimum of two pre-planned adversary aircraft. May be logged in conjunction with baseline training requirements.

A2.1.41. **Non-demanding Sortie.** A day sortie that provides the pilot with the opportunity to regain basic flying proficiency without excessively tasking those skills that have been under used during the non-flying period. Authorized events flown on a nondemanding sortie are: Instruments, AHC, low level navigation at or above 1000 feet AGL, unopposed basic weapons delivery, CAS > 5000 feet AGL (including weapons delivery and recovery) and intercepts executed under limited-maneuvering training rules, BFM (AGRS only). SQ/CCs may delete sorties/events from this non-demanding sortie list, depending on unit tasking and the individual's capabilities.

A2.1.42. **Non-effective Sortie.** A sortie planned and launched as a training mission, test mission, basic skills sortie, or collateral sortie that, due to some circumstance (weather, IFE, maintenance, etc.), fails to accomplish a sufficient number of planned events. While maintenance statistics support historical data for sorties that are cancelled before takeoff, a non-effective sortie or "air abort" is not usually captured by maintenance for future flying hour programming. These sorties must be accounted for in building unit flying hour programs.

A2.1.43. **NVG LOW ALT Event** (ANG: N/A) Event is defined as performing realistic, mission oriented low altitude NVG operations below the MSA during high-illumination. Events include low altitude navigation, tactical formation, defensive maneuvering to avoid or negate threats, and air-to-surface attacks.

A2.1.44. **OCA-A Mission.** Mission designed to develop proficiency in OCA-A tactics. Mission elements include: Intel scenario and tactical mission planning, execution of striker escort and sweep tactics designed to detect, engage, and negate simulated adversary aircraft which are operating within specific commit criteria (i.e., range, airspace corridor, vul time, etc.), and in-flight report.

A2.1.45. **Red Air Mission.** A/A mission where tactics, aircraft simulation, weapon systems, and/or maneuvering is limited to the extent that complete own MDS training is not accomplished. Restrictions which limit aircraft capabilities to some level which might be encountered in combat do not require logging the mission as Red Air. For CMR pilots, Red Air mission allocations in the RTM are a maximum cap on degraded training. Red air missions flown above max allocation do not count toward RAP mission requirements/lookback. However, CMR pilots may accomplish individual events (e.g. formation landing, AAR, etc.) and update applicable currencies. Unused Red Air allocations should be flown in one of the other A/A training mission categories.

A2.1.46. **SEAD Mission.** Mission designed to develop proficiency in Suppression of Enemy Air Defense tactics. Mission elements include: Intel scenario and integrated mission planning to support force package objectives, execution of tactics to detect and negate enemy IADS, to include SAM, AAA systems, and critical IADS nodes, employing adversary tactics and weapons capabilities to disrupt force package employment/destroy package assets, and in-flight report.

A2.1.47. **Secure Voice Event.** Requires proper radio configuration during tactical mission accomplishment. Only one event may be logged per sortie.

A2.1.48. **Sensor Aided Strafe**. The act of strafing a target using cueing from an IR marker (Sparkle strafe) or Laser Spot Tracker (TISL strafe).

A2.1.49. **Slow Shadow Event.** Intercepting slow flying aircraft (rotary or fixed wing) and maintaining surveillance without being detected. This includes ACA/ONE-specific TTPs such as TGP/ATP VID and TGP/ATP Shadow.

A2.1.50. **Surface Attack Tactics (Night) [SAT-(N)] Mission.** Mission designed to develop proficiency in Surface Attack Tactics (SAT). Missions types include Strategic Attack (SA), Air Interdiction (AI), and Offensive Counterair Air-Surface (OCA-S). Mission elements include: Intel scenario and tactical mission planning, execution against actual or simulated threats, simulated or actual weapons delivery against a tactical target, and INFLTREP. Simulated attacks may be conducted against realistic targets IAW local restrictions. Additional night missions may be applied toward day requirements. All night missions should include the use of NVGs. All NVG aided missions should include covert/lights out training.

A2.1.51. **Terminal Attack Control with SOF Event.** Emphasis on this event is SOF interoperability and support during non-traditional CAS missions. Training requires scenario development, terminal attack, and brief/debrief with SOF personnel. One event, culminating in actual or simulated weapons release, may be logged per target.

A2.1.52. **Terminal Attack with Targeting Pod Event.** These training events integrate targeting pod TTPs with the terminal attack of a CAS target. TGP use includes target identification, designation, tracking, and weapons guidance. Requires JTAC/FAC(A) control culminating in actual or simulated weapons release. Any TGP (LANTIRN, Litening, or Sniper) may be used in fulfillment of this requirement.

**A2.2. Weapons Employment Terms:**

A2.2.1. **Dry Pass.** Weapons delivery pass during which no ordnance is expended.

A2.2.2. **Familiarization (FAM).** See paragraph **5.4**

A2.2.3. **Foul.** A penalty directed to a specific aircraft and pilot for actions inconsistent with established procedures or safety considerations. One foul results in a gross error for that delivery. Two fouls or any dangerous pass will result in mandatory expulsion from any further deliveries during that mission and a gross error score for the event. A foul will be charged IAW flying directive publications. Do not use verbal warnings instead of fouls.

A2.2.4. **Gross Error.** A penalty score or miss assigned to an aircrew's records when a weapons delivery attempt results in: munitions impact outside the range scoring capability; a chargeable dry pass; a foul; an unintentional release; or exceeding tactical delivery time on final requirements.

A2.2.5. **Hit.** Any munitions impact within the weapons criteria established for that event.

A2.2.6. **Inadvertent Release.** Ordnance which has released without command by the pilot or by a verified system malfunction.. Impact will not be scored.

A2.2.7. **Multiple Release.** More than one weapon released against the same target on a single pass.

A2.2.8. **No Spot.** A weapons release during which no impact was observed. No score or error will be assigned.

A2.2.9. **Qualification QUAL.**  See **Chapter 5**.

A2.2.10. **Tactical Delivery.** A delivery using patterns and techniques that minimize final flight path predictability, yet allow sufficient time for accurate weapons delivery.  Wings level time on final will be limited to 5 seconds or less when aircraft will descend below 4,500 feet AGL.  Timing is from completion of roll-out (as defined in Wing standards or AFTTP), until initiation of recovery.  Exceeding 5 seconds results in a gross error.  Level, IAM, LGB, MAV, and climbing deliveries may exceed 5 seconds.  All tactical deliveries will normally include recovery to egress parameters.

A2.2.11. **Unintentional Release.** Ordnance released due to pilot error. Scored as gross error regardless of impact point.